United States
Environmental Protection
Agency

Solid Waste and
Emergency Response
(5305W)

EPA530-R-99-036c
PB99-166 845
September 1999

EPA

National Analysis

The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)

Printed on paper that contains at least
30 percent postconsumer fiber.

This page intentionally left blank.

CONTENTS

Executive Summary

The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)

Printed on paper that contains at least 30 percent postconsumer fiber.

This page intentionally left blank.

EXECUTIVE SUMMARY

The United States Environmental Protection Agency (EPA), in partnership with the States[1], biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The purpose of *The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)* is to communicate the findings of EPA's 1997 Biennial Reporting System (BRS) data collection efforts to the public, government agencies, and the regulated community.[2] The Report consists of six volumes:

- ***Executive Summary*** provides an overview of national hazardous waste generation and management practices;

- ***National Analysis*** presents a detailed look at waste-handling practices in the EPA Regions, States, and largest facilities nationally, including (1) the quantity of waste generated, managed, shipped and received, and imported and exported between States and (2) the number of generators and managing facilities;

- ***State Summary Analysis*** provides a two-page overview of the generation and management practices of individual States;

- ***State Detail Analysis*** is a detailed look at each State's waste handling practices, including overall totals for generation, management, and shipments and receipts, as well as totals for the largest fifty facilities;

- ***List of Large Quantity Generators*** identifies every hazardous waste generator in the United States that reported itself to be a large quantity generator in 1997; and

- ***List of Treatment, Storage, and Disposal Facilities*** identifies every hazardous waste manager in the United States that reported itself to be a treatment, storage, or disposal facility in 1997.

[1]The term "State" includes the District of Columbia, Puerto Rico, Guam, the Navajo Nation, the Trust Territories, and the Virgin Islands, in addition to the 50 United States.

[2]Some respondents from the States of Georgia and Connecticut submitted Confidential Business Information (CBI) pursuant to §40 CFR 260.2(b). While not included in any public BRS database, CBI has been incorporated into the *Executive Summary* and *National Analysis* volumes of this Report wherever possible. Where CBI has been omitted from these volumes, a footnote has been provided.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

RCRA HAZARDOUS WASTE

Throughout this Report, the term RCRA hazardous waste refers to solid waste assigned a Federal Hazardous Waste Code and regulated by RCRA. Some States elect to regulate wastes not regulated by EPA; these wastes are assigned State Hazardous Waste Codes and are not included in this Report. The reader can find more detailed explanations in the *RCRA Orientation Manual* (http://www.epa.gov/epaoswer/general/orientat/) and in the Code of Federal Regulations in 40 CFR Parts 260 and 261 (http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-I/). Please refer to Appendix E of this Report for a complete list of EPA Hazardous Waste Codes used by the regulated community for their 1997 Biennial Report submissions. Details about the information submitted by the regulated community can be found in the *1997 Hazardous Waste Report Instructions and Forms* (http://www.epa.gov/epaoswer/hazwaste/data/brsforms.htm).

CHANGES TO 1997 BIENNIAL REPORTING REQUIREMENTS AND THE NATIONAL BIENNIAL REPORT DATA PRESENTED IN THIS REPORT

In accordance with EPA's efforts to reduce the record keeping and reporting burden on the regulated community, EPA streamlined the Federal data collection forms *(1997 Hazardous Waste Report Instructions and Forms)* for the 1997 Biennial Report cycle by eliminating the Process System (PS) Form. EPA would like to caution all readers of this Report that the change to eliminate the PS Form, along with the changes to the reporting requirements for aqueous wastes, commonly called wastewaters, managed in treatment systems regulated by the Clean Water Act (CWA) and not by the Resource Conservation and Recovery Act (RCRA), will make cursory comparisons of the 1997 National Biennial Report to earlier National Reports misleading.

Wastewaters are defined for biennial reporting as wastes that have a particular form and/or are managed on-site or off-site in treatment systems typically used to manage wastewater. All wastes bearing one of the following wastewater Form Codes (B101-102; B105, B110-116) and/or System Type Codes (M071-079; M081-085, 089; M091-094, 099; M121-125,

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

129; M134-136) are excluded from the National Report data and the 1997 National Biennial Report, **with one exception: wastewaters managed by System Type Code M134 (Deepwell/Underground Injection) are included in the 1997 National Biennial Report.** Refer to Appendix C and D for complete descriptions of the Form Codes and System Type Codes referenced above.

In previous National Reports, the PS Form was used to separate and exclude from the National Report data all wastes going to on-site treatment systems **exempt** from RCRA permitting requirements. **For the 1997 National Biennial Report, EPA included all non-wastewater data and excluded all wastewater data. The wastewater data was excluded regardless of whether the wastes were managed in RCRA permitted systems prior to management in on-site or off-site treatment systems exempt from RCRA permitting requirements.** This is significant, because historically EPA has included only those wastes managed in units subject to RCRA permitting requirements in the National Biennial Reports. EPA does not believe the inclusion of all non-wastewaters will distort the RCRA hazardous waste management picture presented in this Report, because only a small volume of non-wastewaters are managed in treatment systems exempt from RCRA permitting requirements.

RCRA HAZARDOUS WASTE GENERATION

RCRA hazardous waste generation information is obtained from data reported by RCRA large quantity generators (LQGs). A generator is defined as a Federal large quantity generator if:

- the generator generated in any single month 1,000 kg (2,200 pounds or 1.1 tons) or more of RCRA hazardous waste; or

- the generator generated in any single month, or accumulated at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or

- the generator generated, or accumulated at any time, more than 100 kg (220 pounds) of spill cleanup material contaminated with RCRA acute hazardous waste.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

All generators that reported LQG status in 1997 are required to provide EPA with 1997 waste generation and management information. It is important to note that the LQGs identified in this Report have been included based on the most current information made available to EPA by the States. Both EPA and the States have made a significant effort to ensure the accuracy of this data. However, the LQG counts may include some generators that, when determining whether they were LQGs, used a lower State-defined threshold for LQGs, counted wastes regulated only by their States, or counted wastes exempt from Federal regulation.

To help provide a more accurate picture of hazardous waste generation in the United States, EPA requests specific waste generation information from LQGs. For each RCRA hazardous waste generated, LQGs are required to provide a waste description, the applicable Federal Hazardous Waste Codes that most accurately represent the waste generated, and the quantity of waste generated.

In 1997, 20,316 LQGs reported they generated 40.7 million tons of RCRA hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of LQGs decreased by 551, and the quantity of hazardous waste generated decreased by 173 million tons or 81%. The decrease in national hazardous waste generation is due in large part to the exclusion of wastewaters from the 1997 national reporting logic. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report."

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Biennial Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Report). As presented in Exhibit B.1, 36.3 million tons

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

of non-wastewater wastes were generated in 1995; therefore, a more accurate picture of the change in national hazardous waste generation between 1995 and 1997 is an increase of 4.4 million tons or 11%. Much of this increase resulted from a change in a few generators' wastewater management practices. In 1995, a few generators reported managing wastewaters in treatment systems exempt from RCRA permitting requirements, and, in accordance with the 1995 national reporting logic, these exempt wastewaters were excluded from the 1995 National Biennial Report. In 1997, the same generators reported managing these same wastewaters in Deepwell/Underground Injection (M134), a treatment system included in the 1997 National Biennial Report.

As identified in Exhibit 1, the five (5) States which contributed most to the national hazardous waste generation total in 1997 were Texas (19.0 million tons), Louisiana (4.6 million tons), Illinois (2.2 million tons), Ohio (1.7 million tons), and Mississippi (1.7 million tons). Together, the LQGs in these States accounted for 72% of the national total quantity generated.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 1 Quantity of RCRA Hazardous Waste Generated and Number of Hazardous Waste Generators, by State, 1997

	HAZARDOUS WASTE QUANTITY			LARGE QUANTITY GENERATORS		
STATE	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	14	423,968	1.0	25	268	1.3
ALASKA	47	4,547	0.0	44	50	0.2
ARIZONA	35	53,031	0.1	31	180	0.9
ARKANSAS	8	1,052,744	2.6	27	206	1.0
CALIFORNIA	12	672,946	1.7	2	1,782	8.8
COLORADO	28	82,021	0.2	32	163	0.8
CONNECTICUT	32	60,219	0.1	15	404	2.0
DELAWARE	39	19,353	0.0	42	66	0.3
DISTRICT OF COLUMBIA	54	499	0.0	50	20	0.1
FLORIDA	16	398,535	1.0	17	378	1.9
GEORGIA	20	275,096	0.7	14	405	2.0
GUAM	55	412	0.0	53	8	0.0
HAWAII	45	7,241	0.0	47	41	0.2
IDAHO	9	1,014,825	2.5	45	48	0.2
ILLINOIS	3	2,201,025	5.4	5	1,058	5.2
INDIANA	7	1,077,410	2.6	9	633	3.1
IOWA	37	33,681	0.1	30	182	0.9
KANSAS	6	1,333,169	3.3	26	215	1.1
KENTUCKY	21	192,318	0.5	20	348	1.7
LOUISIANA	2	4,624,829	11.4	18	363	1.8
MAINE	46	4,758	0.0	35	137	0.7
MARYLAND	31	63,498	0.2	23	327	1.6
MASSACHUSETTS	27	94,467	0.2	12	474	2.3
MICHIGAN	10	994,047	2.4	8	682	3.4
MINNESOTA	13	427,390	1.1	24	274	1.3
MISSISSIPPI	5	1,654,338	4.1	29	193	1.0
MISSOURI	25	116,705	0.3	18	363	1.8
MONTANA	41	12,266	0.0	46	47	0.2
NAVAJO NATION	56	150	0.0	54	6	0.0
NEBRASKA	38	23,491	0.1	41	68	0.3
NEVADA	40	12,518	0.0	39	90	0.4
NEW HAMPSHIRE	44	9,751	0.0	33	152	0.7
NEW JERSEY	18	348,409	0.9	7	819	4.0
NEW MEXICO	26	99,474	0.2	48	39	0.2
NEW YORK	15	419,899	1.0	1	2,772	13.6
NORTH CAROLINA	30	66,501	0.2	11	505	2.5
NORTH DAKOTA	50	2,686	0.0	51	16	0.1
OHIO	4	1,693,247	4.2	3	1,271	6.3
OKLAHOMA	19	315,296	0.8	34	144	0.7
OREGON	36	49,877	0.1	28	203	1.0
PENNSYLVANIA	17	370,024	0.9	6	1,042	5.1
PUERTO RICO	34	54,120	0.1	38	106	0.5
RHODE ISLAND	42	11,643	0.0	37	107	0.5
SOUTH CAROLINA	43	10,793	0.0	21	341	1.7
SOUTH DAKOTA	53	948	0.0	49	21	0.1
TENNESSEE	11	745,458	1.8	13	461	2.3
TEXAS	1	18,973,406	46.6	4	1,219	6.0
TRUST TERRITORIES	52	1,101	0.0	55	3	0.0
UTAH	29	78,555	0.2	40	89	0.4
VERMONT	48	4,064	0.0	43	65	0.3
VIRGIN ISLANDS	49	2,811	0.0	56	2	0.0
VIRGINIA	33	57,395	0.1	22	329	1.6
WASHINGTON	24	126,601	0.3	10	595	2.9
WEST VIRGINIA	22	152,843	0.4	36	119	0.6
WISCONSIN	23	147,959	0.4	16	400	2.0
WYOMING	51	1,478	0.0	52	15	0.1
CBI DATA	N/A	242	N/A	N/A	2	N/A
TOTAL		**40,676,075**	**100.0**		**20,316**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

RCRA HAZARDOUS WASTE MANAGEMENT

RCRA hazardous waste management information is obtained from data reported by active, permitted RCRA treatment, storage, or disposal facilities (TSDs). A TSD is defined as any facility which treats, stores, or disposes of RCRA hazardous waste, regardless of the quantity managed. Only wastes that were treated or disposed of in 1997 are included in the management quantities in this Report. Wastes generated and subsequently stored in 1997 are *not* included in the management quantities in this Report.

To help provide a more accurate picture of hazardous waste management practices in the United States, EPA requests specific waste management information from TSDs. For each RCRA hazardous waste managed, TSDs are required to provide the quantity of waste managed and the System Type Code which represents the management method used to manage the waste.

It is important to note that the total quantity of RCRA hazardous waste generated is less than the total quantity managed. Some of the reasons for this variance include: wastes generated during non-reporting years but shipped and treated or disposed during a reporting year and wastes received for management from generators in foreign countries.

In 1997, 2,025 TSDs reported they managed 37.7 million tons of RCRA hazardous waste. Of the 2,025 facilities, 1,078 were storage-only facilities. When comparing the 1995 National Biennial Report with the 1997 Report, the number of TSDs increased by 42, and the total quantity of hazardous waste managed decreased by 170.5 million tons or 82%. This decrease was largely attributable to the exclusion of wastewaters from the 1997 national reporting logic. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the Biennial Report Data Presented in this Report."

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Biennial Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Report.) As presented in Exhibit B.2, 35.1 million tons of non-wastewater wastes were managed in 1995; therefore, a more accurate picture of the change in national hazardous waste management between 1995 and 1997 is an increase of 2.6 million tons or 7%. A large portion of this increase resulted from a change in wastewater management practices. In 1995, a few TSDs reported managing wastewater in treatment systems exempt from RCRA permitting requirements, and, in accordance with the 1995 national reporting logic, these exempt wastewaters were excluded from the 1995 National Biennial Report. In 1997, the same TSDs reported managing these same wastewaters in Deepwell/Underground Injection (M134), a treatment system included in the 1997 National Biennial Report. Other factors contributing to the increase included increased waste management activities due to a landfill closing and remediation wastes from RCRA Corrective Action.

As identified in Exhibit 2, the five (5) States whose TSDs managed the largest quantities of hazardous wastes were Texas (17.4 million tons), Louisiana (4.5 million tons), Ohio (1.7 million tons), Mississippi (1.7 million tons), and Kansas (1.6 million tons). The TSDs in these five (5) States account for 71% of the national management total.

In 1997, *land disposal* accounted for 76% of the national non-wastewater management total. Land disposal methods include:

Deepwell/Underground Injection	26 million tons
Landfill	1.5 million tons
Surface Impoundment	1 million tons
Land Treatment/Application/Farming	19 thousand tons

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2 Quantity of RCRA Hazardous Waste Managed and Number of RCRA TSD Facilities, by State, 1997

	HAZARDOUS WASTE QUANTITY [1]			TSD FACILITIES		
STATE	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	14	415,166	1.1	15	44	2.2
ALASKA	12	449,486	1.2	43	6	0.3
ARIZONA	40	4,218	0.0	29	23	1.1
ARKANSAS	10	1,001,426	2.7	29	23	1.1
CALIFORNIA	7	1,160,627	3.1	1	250	12.4
COLORADO	32	37,658	0.1	32	22	1.1
CONNECTICUT	36	26,680	0.1	25	27	1.3
DELAWARE	43	2,131	0.0	47	4	0.2
DISTRICT OF COLUMBIA	50	0	0.0	51	1	0.0
FLORIDA	21	207,560	0.6	14	46	2.3
GEORGIA	26	72,558	0.2	12	55	2.7
GUAM	50	0	0.0	51	1	0.0
HAWAII	49	99	0.0	48	3	0.1
IDAHO	8	1,093,366	2.9	40	7	0.3
ILLINOIS	13	445,728	1.2	6	86	4.2
INDIANA	6	1,357,777	3.6	17	40	2.0
IOWA	42	3,349	0.0	21	28	1.4
KANSAS	5	1,558,943	4.1	27	24	1.2
KENTUCKY	25	85,575	0.2	21	28	1.4
LOUISIANA	2	4,503,985	11.9	11	57	2.8
MAINE	46	718	0.0	29	23	1.1
MARYLAND	39	4,560	0.0	26	25	1.2
MASSACHUSETTS	37	16,467	0.0	21	28	1.4
MICHIGAN	9	1,075,667	2.9	4	113	5.6
MINNESOTA	23	141,292	0.4	27	24	1.2
MISSISSIPPI	4	1,720,718	4.6	36	16	0.8
MISSOURI	20	238,179	0.6	8	83	4.1
MONTANA	45	987	0.0	39	8	0.4
NAVAJO NATION	50	0	0.0	56	0	0.0
NEBRASKA	31	41,231	0.1	38	11	0.5
NEVADA	35	29,313	0.1	43	6	0.3
NEW HAMPSHIRE	50	0	0.0	51	1	0.0
NEW JERSEY	24	86,095	0.2	7	85	4.2
NEW MEXICO	22	189,509	0.5	37	15	0.7
NEW YORK	15	411,616	1.1	9	73	3.6
NORTH CAROLINA	38	15,674	0.0	5	100	4.9
NORTH DAKOTA	44	1,188	0.0	40	7	0.3
OHIO	3	1,739,368	4.6	13	52	2.6
OKLAHOMA	16	405,898	1.1	16	41	2.0
OREGON	33	32,150	0.1	40	7	0.3
PENNSYLVANIA	11	496,136	1.3	10	63	3.1
PUERTO RICO	27	70,188	0.2	21	28	1.4
RHODE ISLAND	41	3,840	0.0	48	3	0.1
SOUTH CAROLINA	19	302,472	0.8	32	22	1.1
SOUTH DAKOTA	50	0	0.0	50	2	0.1
TENNESSEE	17	403,094	1.1	19	30	1.5
TEXAS	1	17,371,102	46.0	2	135	6.7
TRUST TERRITORIES	48	524	0.0	51	1	0.0
UTAH	18	325,888	0.9	35	20	1.0
VERMONT	50	0	0.0	45	5	0.2
VIRGIN ISLANDS	47	659	0.0	51	1	0.0
VIRGINIA	29	47,737	0.1	18	32	1.6
WASHINGTON	28	49,157	0.1	19	30	1.5
WEST VIRGINIA	30	44,438	0.1	32	22	1.1
WISCONSIN	34	30,934	0.1	3	132	6.5
WYOMING	50	0	0.0	45	5	0.2
CBI DATA	N/A	0	N/A	N/A	1	N/A
TOTAL		**37,723,129**	**100.0**		**2,025**	**100.0**

[1]Quantity managed by storage only is excluded.

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Recovery operations accounted for 10% of the national non-wastewater management total. Recovery operations include:

Fuel Blending	1.5 million tons
Metals Recovery (for Reuse)	1.1 million tons
Solvents Recovery	617 thousand tons
Other Recovery	443 thousand tons

Thermal treatment accounted for 9% of the national non-wastewater management total. Thermal treatment units include:

Energy Recovery (for Reuse as Fuel)	1.7 million tons
Incineration	1.7 million tons

The remaining non-wastewater management quantities (5%) were managed in *other treatment and disposal units*, including:

Stabilization	1.4 million tons
Sludge Treatment	411 thousand tons
Other Disposal (Specified in Comments)	251 thousand tons

RCRA HAZARDOUS WASTE SHIPMENTS AND RECEIPTS

RCRA hazardous waste shipment information is obtained from data reported by both RCRA LQGs and RCRA TSDs. To help provide a more accurate picture of hazardous waste shipments in the United States, EPA requests specific shipment information. For each waste shipped, LQGs and TSDs are required to provide a waste description, the applicable Federal

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Hazardous Waste Codes, the quantity of waste shipped, and the EPA Identification Number of the receiving facility. All RCRA non-wastewater shipments reported by RCRA LQGs and TSDs are included in the waste shipment quantities in this Report, even if the waste was shipped to a transfer facility. In some instances, waste is transferred within a physical location that has more than one EPA Identification Number. These waste transfers are treated as shipments.

RCRA hazardous waste receipt information is obtained from data reported by RCRA TSDs. To help provide a more accurate picture of hazardous waste receipts in the United States, EPA requests certain receipt information from TSDs. For each waste received, TSDs are required to provide a waste description, the applicable Federal Hazardous Waste Codes, the quantity of waste received, and the EPA Identification Number of the facility from which the waste was received. For each received waste which is subsequently managed, TSDs are required to provide the System Type Code which represents the management method used to manage the waste.

RCRA hazardous waste export quantities include wastes generated in one State and shipped to a receiver in a different State. Exports are calculated from information provided by waste shippers. RCRA hazardous waste imports include all wastes received by a State which differs from the State of origin. RCRA hazardous waste imports are calculated from information provided by RCRA TSDs.

In 1997, 18,029 shippers reported shipping 7.3 million tons of hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of shippers decreased by 2,468, and the quantity of waste shipped decreased by 3.3 million tons, a 31% decrease. Some of the decrease in the quantity of waste shipped may be attributable to the exclusion of wastewaters from the 1997 national biennial reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled “Changes to 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report.”

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

The wastewater exclusion will make cursory comparisons between the 1997 National Reports and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.3, 6.2 million tons of non-wastewater wastes were shipped in 1995; therefore, a more accurate picture of the change in national hazardous waste shipments between 1995 and 1997 is a decrease of 1.1 million tons or 15%.

Of the 7.3 million tons of RCRA hazardous waste shipped in 1997, 4.4 million tons of waste were **exported** from the State in which they were generated to other States. When comparing the 1995 National Biennial Report with the 1997 Report, the quantity of waste exported decreased by 924 thousand tons or 17%. Some of the decrease in the quantity of waste exported may be attributable to the exclusion of wastewaters from the 1997 national reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors.

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.5, 3.6 million tons of non-wastewater wastes were exported to other States in 1995; therefore, a more accurate picture of the change in national hazardous waste exports between 1995 and 1997 is an increase of 753 thousand tons or 17%.

In 1997, 543 TSDs reported receiving 8 million tons of RCRA hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of TSDs receiving waste decreased by 101, and the quantity of waste received decreased by 1.3 million tons or 14%. Some of the decrease in the quantity of waste received may be attributable to the exclusion of wastewaters from the 1997 national reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.4, 7.9 million tons of non-wastewater wastes were received in 1995; therefore, a more accurate picture of the change in national hazardous waste receipts between 1995 and 1997 is an increase of 87 thousand tons or 1%.

Of the 8 million tons of RCRA hazardous waste received in 1997, 4 million tons of waste were **imported** from other States. When comparing the 1995 National Biennial Report with the 1997 Report, the quantity of waste imported decreased by 1.9 million tons or 32%. Some of the decrease in the quantity of waste imported may be attributable to the exclusion of wastewaters from the 1997 national reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors.

The wastewater exclusion will make cursory comparisons between the 1997 National Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.5, 5.1 million tons of non-wastewater wastes were imported in 1995; therefore, a more accurate picture of the change in national hazardous waste imports between 1995 and 1997 is a decrease of 1.1 million tons or 22%.

WHERE TO OBTAIN ADDITIONAL INFORMATION

All volumes of *The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)* and the 1997 Biennial Reporting System (BRS) data files can be accessed via the Internet at http://www.epa.gov/epaoswer/hazwaste/data/#brs or purchased from the National Technical Information Service (NTIS) at (703) 487-4650.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

This page intentionally left blank.

EPA **National Analysis**

The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)

Printed on paper that contains at least 30 percent postconsumer fiber.

This page intentionally left blank.

NATIONAL BIENNIAL RCRA HAZARDOUS WASTE REPORT

The United States Environmental Protection Agency (EPA), in partnership with the States[1], biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The purpose of this Report is to communicate the findings of EPA's 1997 Biennial Reporting System (BRS) data collection efforts to the public, government agencies, and the regulated community.[2]

1.0 WASTE GENERATION

The following section provides an overview of the 1997 RCRA hazardous waste generation data through a series of exhibits and textual summaries. For a complete description of this section's contents, please refer to the *Executive Summary* sections entitled "RCRA Hazardous Waste" and "RCRA Hazardous Waste Generation."

In 1997, 20,316 large quantity generators (LQGs) reported they generated 40.7 million tons[3] of hazardous wastes regulated by RCRA. When comparing the 1995 National Biennial Report with the 1997 Report, the number of LQGs decreased by 551, and the quantity of hazardous waste generated decreased by 173 million tons or 81%. This decrease in national hazardous waste generation is due in large part to the exclusion of wastewaters from the 1997 national reporting logic. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report."

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of this Report provides the 1995 National Biennial Report data *excluding wastewater* (i.e., the data was compiled using

---

1 The term "State" includes the District of Columbia, Puerto Rico, Guam, the Navajo Nation, the Trust Territories, and the Virgin Islands, in addition to the 50 United States.

2 Some respondents from Georgia and Connecticut have submitted Confidential Business Information (CBI) pursuant to §40 CFR 260.2(b). While not included in any public BRS database, CBI has been incorporated into the *Executive Summary* and *National Analysis* volumes of this Report wherever possible. Where CBI has been omitted from these volumes, a footnote has been provided.

3 1 Ton = 2,000 pounds

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

the same national reporting logic used to exclude wastewater data from the 1997 National Report). As presented in Exhibit B.1, 36.3 million tons of non-wastewater wastes were generated in 1995; therefore, a more accurate picture of the change in national hazardous waste generation between 1995 and 1997 is an increase of 4.4 million tons or 11%. Much of this increase resulted from a change in a few generators' wastewater management practices. In 1995, a few generators reported managing wastewaters in treatment systems exempt from RCRA permitting requirements, and, in accordance with the 1995 national reporting logic, these exempt wastewaters were excluded from the 1995 National Biennial Report. In 1997, the same generators reported managing these same wastewaters in Deepwell/Underground Injection (M134), a treatment system included in the 1997 National Biennial Report.

Exhibits 1.1, 1.2, and 1.3 present the number of LQGs and the quantity of RCRA hazardous waste generated by LQGs *in each EPA Region*[4]. LQGs in three (3) of the EPA Regions (Regions 6, 5, and 4) produced 87% of the 40.7 million tons generated nationally in 1997. LQGs in Region 6 generated 25 million tons (or 62% of the national total), LQGs in Region 5 generated 6.5 million tons (16%), and LQGs in Region 4 generated 3.7 million tons (9%).

As Exhibits 1.2 and 1.3 reveal, there is not necessarily a correlation between the Regions which generate the largest quantities of hazardous waste and the Regions with the greatest number of LQGs. In 1997, the Regions with the most LQGs were Region 5 (4,318 or 21% of the national total), Region 2 (3,699 or 18%), and Region 4 (2,899 or 14%). These three (3) Regions accounted for 54% of the total number of LQGs. While LQGs in Region 6 generated the largest percentage of hazardous waste (25 million tons), the Region ranked fifth in number of LQGs (1,971). Region 5 had the most LQGs (4,318), though the Region ranked second in hazardous waste generation (6.5 million tons). Region 8 had the fewest LQGs (351) and also generated the least amount of hazardous waste (178 thousand tons).

[4] Appendix A includes a list of States by EPA Region.

Exhibit 1.1 Number and Percentage of RCRA Hazardous Waste Generators and Total RCRA Hazardous Waste Quantity Generated, by EPA Region, 1997

	HAZARDOUS WASTE QUANTITY		LARGE QUANTITY GENERATORS	
EPA REGION	TONS GENERATED	PERCENTAGE	NUMBER	PERCENTAGE
1	184,902	0.5	1,339	6.6
2	825,239	2.0	3,699	18.2
3	663,612	1.6	1,903	9.4
4	3,767,006	9.3	2,899	14.3
5	6,541,078	16.1	4,318	21.3
6	25,065,748	61.6	1,971	9.7
7	1,507,046	3.7	828	4.1
8	177,953	0.4	351	1.7
9	747,399	1.8	2,110	10.4
10	1,195,850	2.9	896	4.4
CBI DATA	242	N/A	2	N/A
TOTAL	**40,676,075**	**100.0**	**20,316**	**100.0**

Exhibit 1.2 Number and Percentage of RCRA Hazardous Waste Generators and Total RCRA Hazardous Waste Quantity Generated in Each EPA Region, by Highest Quantity Generated, 1997

	HAZARDOUS WASTE QUANTITY		LARGE QUANTITY GENERATORS	
EPA REGION	TONS GENERATED	PERCENTAGE	NUMBER	PERCENTAGE
6	25,065,748	61.6	1,971	9.7
5	6,541,078	16.1	4,318	21.3
4	3,767,006	9.3	2,899	14.3
7	1,507,046	3.7	828	4.1
10	1,195,850	2.9	896	4.4
2	825,239	2.0	3,699	18.2
9	747,399	1.8	2,110	10.4
3	663,612	1.6	1,903	9.4
1	184,902	0.5	1,339	6.6
8	177,953	0.4	351	1.7
CBI DATA	242	N/A	2	N/A
TOTAL	**40,676,075**	**100.0**	**20,316**	**100.0**

Note: Columns for these two exhibits may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 1.3 Number and Percentage of RCRA Hazardous Waste Generators and Total RCRA Hazardous Waste Quantity Generated in Each EPA Region, by Highest Number of Generators, 1997

	LARGE QUANTITY GENERATORS		HAZARDOUS WASTE QUANTITY	
EPA REGION	NUMBER	PERCENTAGE	TONS GENERATED	PERCENTAGE
5	4,318	21.3	6,541,078	16.1
2	3,699	18.2	825,239	2.0
4	2,899	14.3	3,767,006	9.3
9	2,110	10.4	747,399	1.8
6	1,971	9.7	25,065,748	61.6
3	1,903	9.4	663,612	1.6
1	1,339	6.6	184,902	0.5
10	896	4.4	1,195,850	2.9
7	828	4.1	1,507,046	3.7
8	351	1.7	177,953	0.4
CBI DATA	2	N/A	242	N/A
TOTAL	**20,316**	**100.0**	**40,676,075**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Exhibits 1.4, 1.5, and 1.6 present the number of LQGs and the quantity of RCRA hazardous waste generated by LQGs *in each State*. The five (5) States whose LQGs produced the largest amount of hazardous waste were Texas (19.0 million tons), Louisiana (4.6 million tons), Illinois (2.2 million tons), Ohio (1.7 million tons), and Mississippi (1.7 million tons). Together, the LQGs in these States accounted for 72% of the national total quantity generated.

The States with the most LQGs were New York (2,772), California (1,782), Ohio (1,271), Texas (1,219), Illinois (1,058), Pennsylvania (1,058), New Jersey (819), and Michigan (682). The LQGs in these States accounted for 52% of the total number of LQGs.

Exhibit 1.7 provides a list of the 50 largest generators in the nation. The listed generators produced 79% (32.1 million tons) of the national total. Seventeen (17) of the top 50 generators are located in Texas, the top-ranked State in hazardous waste generation. These 17 Texas LQGs accounted for 93% of the State's generation total and 44% of the national generation total. The five (5) LQGs in Louisiana, the State

ranked second in hazardous waste generation, accounted for 88% of the State's generation total and 10% of the national generation total. Eight (8) of the largest generators are located in Illinois, Ohio, and Mississippi, the States ranked third, fourth, and fifth, respectively, in hazardous waste generation. These LQGs accounted for 11% of the national total quantity generated.

Exhibit 1.8 illustrates the relationship between various hazardous waste generation quantity ranges and the number of generators that generated within each range. Most of the LQGs (13,476 generators or 66% of the national total) generated between 1.1 and 113.2 tons in 1997. Only 44 LQGs (less than 1% of all LQGs) generated within the top tier of hazardous waste generation, over 111,113.2 tons, but these few LQGs accounted for 78% of the national total quantity generated. Ninety-five percent (95%) of all LQGs generated 1,113 tons or less in 1997.

Exhibit 1.4 Quantity of RCRA Hazardous Waste Generated and Number of Hazardous Waste Generators, by State, 1997

STATE	HAZARDOUS WASTE QUANTITY			LARGE QUANTITY GENERATORS		
	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	14	423,968	1.0	25	268	1.3
ALASKA	47	4,547	0.0	44	50	0.2
ARIZONA	35	53,031	0.1	31	180	0.9
ARKANSAS	8	1,052,744	2.6	27	206	1.0
CALIFORNIA	12	672,946	1.7	2	1,782	8.8
COLORADO	28	82,021	0.2	32	163	0.8
CONNECTICUT	32	60,219	0.1	15	404	2.0
DELAWARE	39	19,353	0.0	42	66	0.3
DISTRICT OF COLUMBIA	54	499	0.0	50	20	0.1
FLORIDA	16	398,535	1.0	17	378	1.9
GEORGIA	20	275,096	0.7	14	405	2.0
GUAM	55	412	0.0	53	8	0.0
HAWAII	45	7,241	0.0	47	41	0.2
IDAHO	9	1,014,825	2.5	45	48	0.2
ILLINOIS	3	2,201,025	5.4	5	1,058	5.2
INDIANA	7	1,077,410	2.6	9	633	3.1
IOWA	37	33,681	0.1	30	182	0.9
KANSAS	6	1,333,169	3.3	26	215	1.1
KENTUCKY	21	192,318	0.5	20	348	1.7
LOUISIANA	2	4,624,829	11.4	18	363	1.8
MAINE	46	4,758	0.0	35	137	0.7
MARYLAND	31	63,498	0.2	23	327	1.6
MASSACHUSETTS	27	94,467	0.2	12	474	2.3
MICHIGAN	10	994,047	2.4	8	682	3.4
MINNESOTA	13	427,390	1.1	24	274	1.3
MISSISSIPPI	5	1,654,338	4.1	29	193	1.0
MISSOURI	25	116,705	0.3	18	363	1.8
MONTANA	41	12,266	0.0	46	47	0.2
NAVAJO NATION	56	150	0.0	54	6	0.0
NEBRASKA	38	23,491	0.1	41	68	0.3
NEVADA	40	12,518	0.0	39	90	0.4
NEW HAMPSHIRE	44	9,751	0.0	33	152	0.7
NEW JERSEY	18	348,409	0.9	7	819	4.0
NEW MEXICO	26	99,474	0.2	48	39	0.2
NEW YORK	15	419,899	1.0	1	2,772	13.6
NORTH CAROLINA	30	66,501	0.2	11	505	2.5
NORTH DAKOTA	50	2,686	0.0	51	16	0.1
OHIO	4	1,693,247	4.2	3	1,271	6.3
OKLAHOMA	19	315,296	0.8	34	144	0.7
OREGON	36	49,877	0.1	28	203	1.0
PENNSYLVANIA	17	370,024	0.9	6	1,042	5.1
PUERTO RICO	34	54,120	0.1	38	106	0.5
RHODE ISLAND	42	11,643	0.0	37	107	0.5
SOUTH CAROLINA	43	10,793	0.0	21	341	1.7
SOUTH DAKOTA	53	948	0.0	49	21	0.1
TENNESSEE	11	745,458	1.8	13	461	2.3
TEXAS	1	18,973,406	46.6	4	1,219	6.0
TRUST TERRITORIES	52	1,101	0.0	55	3	0.0
UTAH	29	78,555	0.2	40	89	0.4
VERMONT	48	4,064	0.0	43	65	0.3
VIRGIN ISLANDS	49	2,811	0.0	56	2	0.0
VIRGINIA	33	57,395	0.1	22	329	1.6
WASHINGTON	24	126,601	0.3	10	595	2.9
WEST VIRGINIA	22	152,843	0.4	36	119	0.6
WISCONSIN	23	147,959	0.4	16	400	2.0
WYOMING	51	1,478	0.0	52	15	0.1
CBI DATA	N/A	242	N/A	N/A	2	N/A
TOTAL		**40,676,075**	**100.0**		**20,316**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 1.5 Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Generated and Number of Hazardous Waste Generators, 1997

STATE	HAZARDOUS WASTE QUANTITY			LARGE QUANTITY GENERATORS		
	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
TEXAS	1	18,973,406	46.6	4	1,219	6.0
LOUISIANA	2	4,624,829	11.4	18	363	1.8
ILLINOIS	3	2,201,025	5.4	5	1,058	5.2
OHIO	4	1,693,247	4.2	3	1,271	6.3
MISSISSIPPI	5	1,654,338	4.1	29	193	1.0
KANSAS	6	1,333,169	3.3	26	215	1.1
INDIANA	7	1,077,410	2.6	9	633	3.1
ARKANSAS	8	1,052,744	2.6	27	206	1.0
IDAHO	9	1,014,825	2.5	45	48	0.2
MICHIGAN	10	994,047	2.4	8	682	3.4
TENNESSEE	11	745,458	1.8	13	461	2.3
CALIFORNIA	12	672,946	1.7	2	1,782	8.8
MINNESOTA	13	427,390	1.1	24	274	1.3
ALABAMA	14	423,968	1.0	25	268	1.3
NEW YORK	15	419,899	1.0	1	2,772	13.6
FLORIDA	16	398,535	1.0	17	378	1.9
PENNSYLVANIA	17	370,024	0.9	6	1,042	5.1
NEW JERSEY	18	348,409	0.9	7	819	4.0
OKLAHOMA	19	315,296	0.8	34	144	0.7
GEORGIA	20	275,096	0.7	14	405	2.0
KENTUCKY	21	192,318	0.5	20	348	1.7
WEST VIRGINIA	22	152,843	0.4	36	119	0.6
WISCONSIN	23	147,959	0.4	16	400	2.0
WASHINGTON	24	126,601	0.3	10	595	2.9
MISSOURI	25	116,705	0.3	18	363	1.8
NEW MEXICO	26	99,474	0.2	48	39	0.2
MASSACHUSETTS	27	94,467	0.2	12	474	2.3
COLORADO	28	82,021	0.2	32	163	0.8
UTAH	29	78,555	0.2	40	89	0.4
NORTH CAROLINA	30	66,501	0.2	11	505	2.5
MARYLAND	31	63,498	0.2	23	327	1.6
CONNECTICUT	32	60,219	0.1	15	404	2.0
VIRGINIA	33	57,395	0.1	22	329	1.6
PUERTO RICO	34	54,120	0.1	38	106	0.5
ARIZONA	35	53,031	0.1	31	180	0.9
OREGON	36	49,877	0.1	28	203	1.0
IOWA	37	33,681	0.1	30	182	0.9
NEBRASKA	38	23,491	0.1	41	68	0.3
DELAWARE	39	19,353	0.0	42	66	0.3
NEVADA	40	12,518	0.0	39	90	0.4
MONTANA	41	12,266	0.0	46	47	0.2
RHODE ISLAND	42	11,643	0.0	37	107	0.5
SOUTH CAROLINA	43	10,793	0.0	21	341	1.7
NEW HAMPSHIRE	44	9,751	0.0	33	152	0.7
HAWAII	45	7,241	0.0	47	41	0.2
MAINE	46	4,758	0.0	35	137	0.7
ALASKA	47	4,547	0.0	44	50	0.2
VERMONT	48	4,064	0.0	43	65	0.3
VIRGIN ISLANDS	49	2,811	0.0	56	2	0.0
NORTH DAKOTA	50	2,686	0.0	51	16	0.1
WYOMING	51	1,478	0.0	52	15	0.1
TRUST TERRITORIES	52	1,101	0.0	55	3	0.0
SOUTH DAKOTA	53	948	0.0	49	21	0.1
DISTRICT OF COLUMBIA	54	499	0.0	50	20	0.1
GUAM	55	412	0.0	53	8	0.0
NAVAJO NATION	56	150	0.0	54	6	0.0
CBI DATA	N/A	242	N/A	N/A	2	N/A
TOTAL		**40,676,075**	**100.0**		**20,316**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 1.6 Rank Ordering of States Based on Number of Hazardous Waste Generators and Quantity of RCRA Hazardous Waste Generated, 1997

STATE	LARGE QUANTITY GENERATORS			HAZARDOUS WASTE QUANTITY		
	RANK	NUMBER	PERCENTAGE	RANK	TONS GENERATED	PERCENTAGE
NEW YORK	1	2,772	13.6	15	419,899	1.0
CALIFORNIA	2	1,782	8.8	12	672,946	1.7
OHIO	3	1,271	6.3	4	1,693,247	4.2
TEXAS	4	1,219	6.0	1	18,973,406	46.6
ILLINOIS	5	1,058	5.2	3	2,201,025	5.4
PENNSYLVANIA	6	1,042	5.1	17	370,024	0.9
NEW JERSEY	7	819	4.0	18	348,409	0.9
MICHIGAN	8	682	3.4	10	994,047	2.4
INDIANA	9	633	3.1	7	1,077,410	2.6
WASHINGTON	10	595	2.9	24	126,601	0.3
NORTH CAROLINA	11	505	2.5	30	66,501	0.2
MASSACHUSETTS	12	474	2.3	27	94,467	0.2
TENNESSEE	13	461	2.3	11	745,458	1.8
GEORGIA	14	405	2.0	20	275,096	0.7
CONNECTICUT	15	404	2.0	32	60,219	0.1
WISCONSIN	16	400	2.0	23	147,959	0.4
FLORIDA	17	378	1.9	16	398,535	1.0
LOUISIANA	18	363	1.8	2	4,624,829	11.4
MISSOURI	18	363	1.8	25	116,705	0.3
KENTUCKY	20	348	1.7	21	192,318	0.5
SOUTH CAROLINA	21	341	1.7	43	10,793	0.0
VIRGINIA	22	329	1.6	33	57,395	0.1
MARYLAND	23	327	1.6	31	63,498	0.2
MINNESOTA	24	274	1.3	13	427,390	1.1
ALABAMA	25	268	1.3	14	423,968	1.0
KANSAS	26	215	1.1	6	1,333,169	3.3
ARKANSAS	27	206	1.0	8	1,052,744	2.6
OREGON	28	203	1.0	36	49,877	0.1
MISSISSIPPI	29	193	1.0	5	1,654,338	4.1
IOWA	30	182	0.9	37	33,681	0.1
ARIZONA	31	180	0.9	35	53,031	0.1
COLORADO	32	163	0.8	28	82,021	0.2
NEW HAMPSHIRE	33	152	0.7	44	9,751	0.0
OKLAHOMA	34	144	0.7	19	315,296	0.8
MAINE	35	137	0.7	46	4,758	0.0
WEST VIRGINIA	36	119	0.6	22	152,843	0.4
RHODE ISLAND	37	107	0.5	42	11,643	0.0
PUERTO RICO	38	106	0.5	34	54,120	0.1
NEVADA	39	90	0.4	40	12,518	0.0
UTAH	40	89	0.4	29	78,555	0.2
NEBRASKA	41	68	0.3	38	23,491	0.1
DELAWARE	42	66	0.3	39	19,353	0.0
VERMONT	43	65	0.3	48	4,064	0.0
ALASKA	44	50	0.2	47	4,547	0.0
IDAHO	45	48	0.2	9	1,014,825	2.5
MONTANA	46	47	0.2	41	12,266	0.0
HAWAII	47	41	0.2	45	7,241	0.0
NEW MEXICO	48	39	0.2	26	99,474	0.2
SOUTH DAKOTA	49	21	0.1	53	948	0.0
DISTRICT OF COLUMBIA	50	20	0.1	54	499	0.0
NORTH DAKOTA	51	16	0.1	50	2,686	0.0
WYOMING	52	15	0.1	51	1,478	0.0
GUAM	53	8	0.0	55	412	0.0
NAVAJO NATION	54	6	0.0	56	150	0.0
TRUST TERRITORIES	55	3	0.0	52	1,101	0.0
VIRGIN ISLANDS	56	2	0.0	49	2,811	0.0
CBI DATA	N/A	2	N/A	N/A	242	N/A
TOTAL		**20,316**	**100.0**		**40,676,075**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

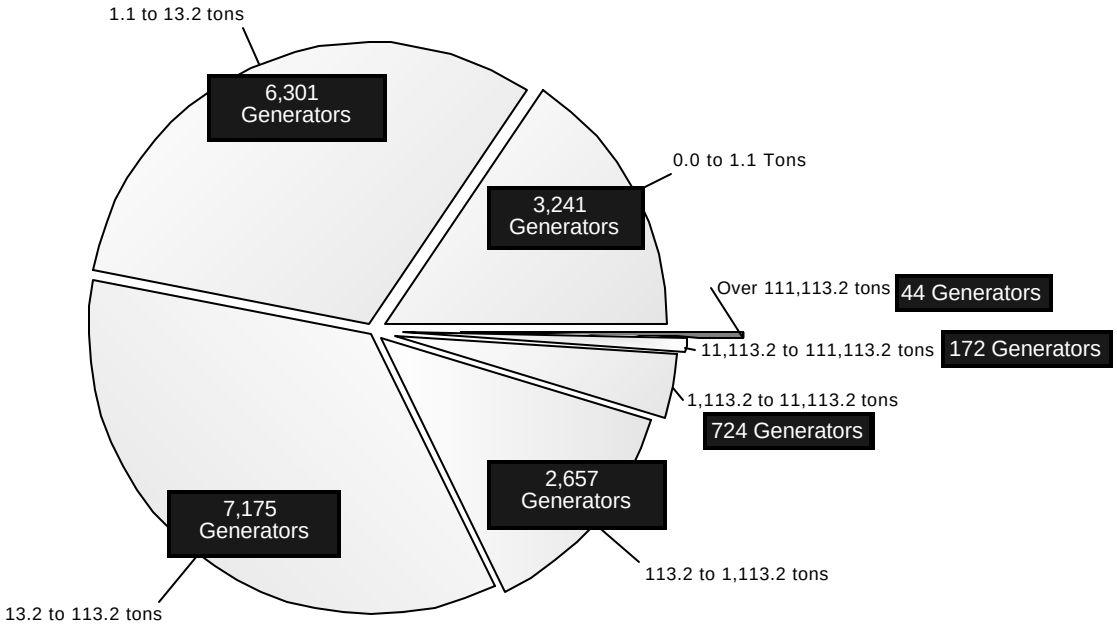
Exhibit 1.7 Fifty Largest RCRA Hazardous Waste Generators in the U.S., 1997

RANK	EPA ID	NAME	CITY	TONS GENERATED
1	TXD008123317	DU PONT DE NEMOURS & CO., E.I.	VICTORIA, TX	4,296,699
2	TXD008080533	TEXAS CITY REFINERY - AMOCO OIL CO	TEXAS CITY, TX	2,646,383
3	TXD001700806	CHOCOLATE BAYOU PLANT	ALVIN, TX	2,607,584
4	LAD008175390	CYTEC INDUSTRIES INC	WAGGAMAN, LA	1,843,575
5	LAD008213191	RUBICON INC	GEISMAR, LA	1,532,487
6	TXD008081101	BEAUMONT WORKS	BEAUMONT, TX	1,391,542
7	TXD059685339	DIAMOND SHAMROCK REFINING COMPANY - MCKE	SUNRAY, TX	1,332,422
8	KSD007482029	VULCAN MATERIALS CO	WICHITA, KS	1,285,739
9	MSD096046792	E.I. DUPONT DE NEMOURS & CO. DELISLE PLA	PASS CHRISTIAN, MS	1,124,915
10	TXD000751172	GREEN LAKE FACILITY	BLOOMINGTON, TX	1,110,873
11	ILD064403199	MOBIL OIL CORP	JOLIET, IL	1,015,073
12	IDD070929518	FMC CORP PHOSPHORUS CHEMICALS	POCATELLO, ID	1,010,394
13	OHD042157644	BP CHEMICALS INC	LIMA, OH	1,001,278
14	TXD008079642	SABINE RIVER WORKS	ORANGE, TX	980,377
15	ARD043195429	GREAT LAKES CHEMICAL CORPORATION	EL DORADO, AR	752,607
16	TXD008106999	MERICHEM - SASOL USA LLC.	HOUSTON, TX	552,486
17	MSD008186587	MORTON INTERNATIONAL, INC	MOSS POINT, MS	492,356
18	TXD007330202	EASTMAN CHEMICAL COMPANY	LONGVIEW, TX	484,849
19	TXD008079527	STERLING CHEMICALS, INC.	TEXAS CITY, TX	469,544
20	LAD001890367	DUPONT & DUPONT DOW ELASTOMERS INC	LAPLACE, LA	453,387
21	TXD083472266	ARCO CHEMICAL	CHANNELVIEW, TX	441,114
22	TXD078432457	CELANESE LTD. CLEAR LAKE PLANT	PASADENA, TX	404,577
23	IND003913423	BETHLEHEM STEEL CORP	CHESTERTON, IN	350,220
24	MND006148092	GOPHER RESOURCE CORP	EAGAN, MN	340,701
25	TXD087491973	SOUTHWESTERN COPPER DIV; AMARILLO COPPER	AMARILLO, TX	290,965
26	ILD080012305	EQUILON ENTERPRISES	ROXANA, IL	283,807
27	OKD000829440	ZINC CORPORATION OF AMERICA	BARTLESVILLE, OK	270,284
28	TXD008081697	BASF CORPORATION	FREEPORT, TX	257,014
29	MID006030373	LOMAC, INC.	MUSKEGON, MI	246,061
30	TXD026481523	GALENA PARK TERMINAL	GALENA PARK, TX	196,633
31	MID006013643	PARKE-DAVIS, DIV. OF WARNER-LAMBERT CO.	HOLLAND, MI	189,402
32	TND003376928	TENN EASTMAN DIVISION OF EASTMAN CHEMICA	KINGSPORT, TN	177,517
33	FLD071951966	SOLUTIA INC	GONZALEZ, FL	175,146
34	ALD046481032	SANDERS LEAD COMPANY INC	TROY, AL	172,034
35	TXD008092793	DOW CHEMICAL COMPANY - OYSTER CREEK SITE	FREEPORT, TX	171,015
36	NJD002454544	MARISOL INC	MIDDLESEX, NJ	161,843
37	ILD005119839	US FILTER/IWT	ROCKFORD, IL	143,306
38	LAD000777201	CHEMICAL WASTE MANAGEMENT	SULPHUR, LA	140,240
39	IND000810861	AMOCO OIL CO WHITING LAKEFRONT	WHITING, IN	139,455
40	GAD050766401	GA EPD/ESCAMBIA TREATING COMPANY	BRUNSWICK, GA	128,036
41	TND982139115	UNISYS EARHART SITE, BRISTOL, TN	BRISTOL, TN	126,418
42	TND053983862	ALLTRISTA ZINC PRODUCTS L.P.	GREENEVILLE, TN	120,187
43	FLD004106811	KAISER ALUMINUM & CHEMICAL CORP	MULBERRY, FL	120,009
44	OHD004234480	AK STEEL CORPORATION MIDDLETOWN WORKS	MIDDLETOWN, OH	114,688
45	MID000724831	MICHIGAN DISPOSAL WASTE TREATMENT PLANT	BELLEVILLE, MI	103,104
46	ILD006278170	ALLIED-SIGNAL INC	METROPOLIS, IL	102,747
47	NMD089416416	GIANT REFINING COMPANY - BLOOMFIELD	BLOOMFIELD, NM	95,061
48	LAD020597597	ANGUS CHEMICAL COMPANY	STERLINGTON, LA	91,523
49	MID980615298	PETROCHEM PROCESSING GRP. OF NORTRU, INC	DETROIT, MI	85,863
50	TXD058275769	CHANNELVIEW COMPLEX	CHANNELVIEW, TX	82,852
TOTAL				**32,106,395**

Note: Column may not sum due to rounding.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 1.8 Number of Large Quantity Generators by Generator Quantity Range, 1997*



* CBI data excluded from exhibit.

Hazardous waste is categorized as either *characteristic* or *listed* waste. Both waste categories (and the subcategories of each) are specifically described in §40 CFR[5] 261, and a list of EPA Hazardous Waste Codes is provided as Appendix E of this Report.

Characteristic wastes refer to any solid waste that exhibits one or more of the following characteristics, ignitability (D001), corrosivity (D002), or reactivity (D003), or contains toxic constituents in excess of Federal standards (D004 to D043).

An ignitable waste is a solid waste that exhibits any of the following properties:

- A liquid, except aqueous solutions containing less than 24 percent alcohol, with a flash point less than 60 degrees Celsius (140 degrees Fahrenheit).
- A nonliquid capable, under normal conditions, of spontaneous and sustained combustion.

[5] Code of Federal Regulations.

- An ignitable compressed gas as defined by Department of Transportation (DOT) regulations.
- An oxidizer per DOT regulations.

A corrosive waste is a solid waste that exhibits the following properties:

- An aqueous material with pH less than or equal to 2, or greater than or equal to 12.5.
- A liquid that corrodes steel at a rate greater than 1/4 inch per year at a temperature of 55 degrees Celsius (130 degrees Fahrenheit).

A reactive waste is a solid waste that exhibits the following properties:

- Normally unstable and reacts violently without detonating.
- Reacts violently with water.
- Forms an explosive mixture with water.
- Contains cyanide or sulfide and generates toxic gases, vapors, or fumes at a pH of between 2 and 12.5.
- Capable of detonation if heated under confinement or subjected to a strong initiating source.
- Capable of detonation at standard temperature and pressure.
- Listed by DOT as Class A or B explosive.

Wastes with the toxicity characteristic are identified through failure of the Toxicity Characteristic Leaching Procedure Test (TCLP). A solid waste exhibits the toxicity characteristic if, using the TCLP or an equivalent method, the extract from a representative sample of the waste contains any of the contaminants D004 to D043 at a concentration equal to or greater than the value described in §40 CFR 261.24.

The term “listed waste” (F, K, P, and U codes) refers to waste that EPA has identified as hazardous as a result of its investigations of particular industries or because EPA has specifically recognized a commercial chemical waste’s toxicity. A solid waste is a “listed” hazardous waste if it is named on one of three lists developed by EPA:

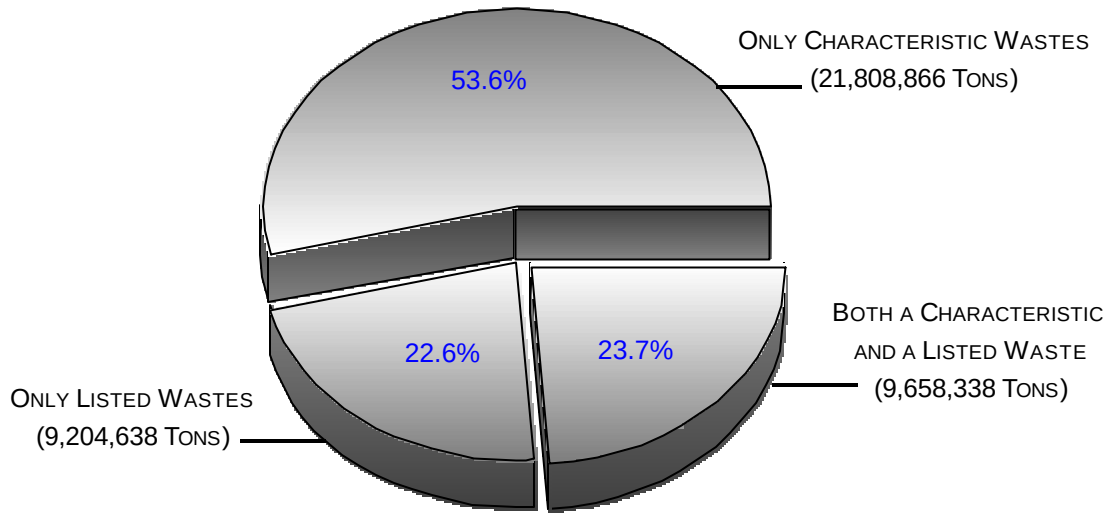
- Non-specific source wastes (‘F’ wastes): These are generic wastes, commonly produced by manufacturing and industrial processes. Examples from this list include spent halogenated solvents used in degreasing, and wastewater treatment sludge from electroplating processes, as well as dioxin wastes, most of which are acutely hazardous wastes due to the danger they present to human health and the environment.

- Specific source wastes ('K' wastes): This list consists of wastes from specifically identified industries such as wood preserving, petroleum refining, and organic chemical manufacturing. These wastes typically include sludges, still bottoms, wastewater, spent catalysts, and residues, (e.g., wastewater treatment sludge from pigment production).

- Commercial chemical products ('P' and 'U' wastes): The third list consists of specific commercial chemical products, or manufacturing chemical intermediates. This list includes chemicals such as chloroform and creosote, acids such as sulfuric acid and hydrochloric acid, and pesticides such as DDT and kepone. The 'U' wastes include toxic chemicals while 'P' waste listings are reserved for acutely toxic chemicals.

Exhibits 1.9, 1.10, and 1.11 divide the 1997 national generation total according to the percentage of characteristic, listed, or a mixture of characteristic and listed. Wastes categorized as only characteristic wastes represented 54% (21.8 million tons) of the national generation total, while listed-only wastes comprised 23% (9.2 million tons), and wastes with both characteristic and listed waste codes constituted 9.7 million tons (24%) of the national total. Mixed wastes (wastes which have multiple characteristics, are listed on more than one list, or are both) represented 9.6 million tons of the national generation total in 1997.

Exhibit 1.9 Percentages of National Generation Total That Were Characteristic, Listed, or Both Characteristic and Listed Waste, 1997*



* CBI data excluded from exhibit.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 1.10 Tons of Generated Waste That Were Only Characteristic Waste, Only Listed Waste, or Both Characteristic and Listed Waste, 1997

ONLY CHARACTERISTIC WASTES		ONLY LISTED WASTES		BOTH A CHARACTERISTIC AND A LISTED WASTE	
ONLY IGNITABLE	1,043,083	ONLY AN F CODE	1,785,193		
ONLY CORROSIVE	2,966,842	ONLY A K CODE	4,486,609		
ONLY REACTIVE	679,725	ONLY A P CODE	3,879		
ONLY D004-17	1,958,849	ONLY A U CODE	729,896		
ONLY D018-43	4,605,547				
HAS MORE THAN ONE CHARACTERISTIC CODE	10,554,821	HAS MORE THAN ONE LISTED CODE	2,199,061		
TOTAL	**21,808,866**	**TOTAL**	**9,204,638**	**BOTH CHARACTERISTIC & LISTED**	**9,658,338**

Note: All quantities are in tons.
CBI data excluded from exhibit.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 1.11 Tons of Generated Waste with Multiple Characteristics, That Were Multiply Listed, or Both, 1997

ONLY CHARACTERISTIC WASTES BUT WITH MULTIPLE CHARACTERISTICS		ONLY LISTED WASTES BUT MULTIPLY LISTED		BOTH CHARACTERISTIC AND LISTED WASTES[1]	
HAS IGNITABLE CODE	2,716,195			IGN. W/ AT LEAST 1 LSTD	2,212,699
HAS CORROSIVE CODE	5,130,705			CORR. W/ AT LEAST 1 LSTD	1,906,964
HAS REACTIVE CODE	3,583,553			REACT. W/ AT LEAST 1 LSTD	602,053
HAS D004-D017 CODE	3,490,525			D004-17 W/ AT LEAST 1 LSTD	2,136,856
HAS D018-D043 CODE	7,489,893			D018-43 W/ AT LEAST 1 LSTD	7,596,732
		HAS F CODE	2,089,201	F WASTE W/ AT LEAST 1 CHAR	8,134,615
		HAS K CODE	2,141,796	K WASTE W/ AT LEAST 1 CHAR	6,804,882
		HAS P CODE	41,606	P WASTE W/ AT LEAST 1 CHAR	177,675
		HAS U CODE	922,626	U WASTE W/ AT LEAST 1 CHAR	1,751,411
TOTAL	**10,554,821**	**TOTAL**	**2,199,061**	**TOTAL**	**9,658,338**

[1] Listed wastes with ignitable, corrosive, reactive, D004-17 (Toxic), or D018-43 (Toxic) characteristics respectively may have other characteristics as well. Similarly, characteristic wastes that are also F, K, P, or U listed wastes respectively may be other listed wastes as well.

Note: All quantities are in tons.
Columns do not sum to total because wastes may be included in more than one category.
CBI data excluded from exhibit.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

2.0 WASTE MANAGEMENT

The following section provides an overview of the 1997 RCRA hazardous waste management data through a series of exhibits and textual summaries. For a complete description of this section's contents, please refer to the *Executive Summary* sections entitled "RCRA Hazardous Waste" and "RCRA Hazardous Waste Management." Also, Appendix C provides a complete list of management systems and the System Type Codes used to identify them.

In 1997, 2,025 treatment, storage, or disposal (TSD) facilities reported they managed 37.7 million tons of hazardous waste through treatment, storage, or disposal. Of the 2,025 TSDs, 1,078 were storage-only facilities in 1997. When comparing the 1995 National Biennial Report with the 1997 Report, the number of TSDs increased by 42, while the quantity of hazardous waste managed decreased 170.5 million tons. This 82% decrease was largely attributable to the exclusion of wastewaters from the 1997 national reporting logic. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report."

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of this Report provides the 1995 National Biennial Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Report). As presented in Exhibit B.2, 35.1 million tons of non-wastewater wastes were managed in 1995; therefore, a more accurate picture of the change in national hazardous waste management between 1995 and 1997 is an increase of 2.6 million tons or 7%. A large portion of this increase resulted from a change in wastewater management practices. In 1995, a few TSDs reported managing wastewaters in treatment systems exempt from RCRA permitting requirements, and, in accordance with the 1995 national reporting logic, these exempt wastewaters were excluded from the 1995 National Biennial Report. In 1997, the same TSDs reported managing these same wastewaters in Deepwell/Underground Injection (M134), a treatment system included in the 1997 National Biennial Report. Other factors contributing to the increase included increased waste management activities due to a landfill closing and remediation wastes from RCRA Corrective Action.

Exhibits 2.1, 2.2, and 2.3 present the quantity of RCRA hazardous waste managed and the number of TSDs *in each EPA Region*[6]. TSDs located in three (3) Regions managed 83% of the 37.7 million tons managed nationally in 1997. These Regions were Region 6 (23.5 million tons), Region 5 (4.8 million tons), and Region 4 (3.2 million tons). As would seem logical, Region 6, Region 5, and Region 4 were also the top-ranked Regions, respectively, in hazardous waste generation in 1997.

While TSDs in Region 6 managed the largest percentage of waste in the nation, the Region ranked fourth in the number of TSDs (271). The three (3) Regions with the most TSDs were Region 5 (447), Region 4 (341), and Region 9 (284). These three (3) Regions combined accounted for 53% of the total number of TSDs. Region 10 had the fewest TSDs (50).

[6] Appendix A includes a list of States by EPA Region.

Exhibit 2.1 Number and Percentage of RCRA TSD Facilities and Total RCRA Hazardous Waste Quantity Managed, by EPA Region, 1997

	HAZARDOUS WASTE QUANTITY [1]		TSD FACILITIES	
EPA REGION	TONS MANAGED	PERCENTAGE	NUMBER	PERCENTAGE
1	47,705	0.1	87	4.3
2	568,559	1.5	187	9.2
3	595,002	1.6	147	7.3
4	3,222,818	8.5	341	16.8
5	4,790,765	12.7	447	22.1
6	23,471,919	62.2	271	13.4
7	1,841,701	4.9	146	7.2
8	365,721	1.0	64	3.2
9	1,194,781	3.2	284	14.0
10	1,624,159	4.3	50	2.5
CBI DATA	0	N/A	1	N/A
TOTAL	**37,723,129**	**100.0**	**2,025**	**100.0**

Exhibit 2.2 Number and Percentage of RCRA TSD Facilities and Total RCRA Hazardous Waste Quantity Managed, by Management Quantity, 1997

	HAZARDOUS WASTE QUANTITY [1]		TSD FACILITIES	
EPA REGION	TONS MANAGED	PERCENTAGE	NUMBER	PERCENTAGE
6	23,471,919	62.2	271	13.4
5	4,790,765	12.7	447	22.1
4	3,222,818	8.5	341	16.8
7	1,841,701	4.9	146	7.2
10	1,624,159	4.3	50	2.5
9	1,194,781	3.2	284	14.0
3	595,002	1.6	147	7.3
2	568,559	1.5	187	9.2
8	365,721	1.0	64	3.2
1	47,705	0.1	87	4.3
CBI DATA	0	N/A	1	N/A
TOTAL	**37,723,129**	**100.0**	**2,025**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns for these two exhibits may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2.3 Number and Percentage of RCRA TSD Facilities and Total RCRA Hazardous Waste Quantity Managed in Each EPA Region, by Highest Number of TSD Facilities, 1997

	TSD FACILITIES		HAZARDOUS WASTE QUANTITY [1]	
EPA REGION	NUMBER	PERCENTAGE	TONS MANAGED	PERCENTAGE
5	447	22.1	4,790,765	12.7
4	341	16.8	3,222,818	8.5
9	284	14.0	1,194,781	3.2
6	271	13.4	23,471,919	62.2
2	187	9.2	568,559	1.5
3	147	7.3	595,002	1.6
7	146	7.2	1,841,701	4.9
1	87	4.3	47,705	0.1
8	64	3.2	365,721	1.0
10	50	2.5	1,624,159	4.3
CBI DATA	1	N/A	0	N/A
TOTAL	**2,025**	**100.0**	**37,723,129**	**100.0**

[1]Quantity managed only by storage is excluded.
Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Exhibits 2.4, 2.5, and 2.6 present the quantity of RCRA hazardous waste managed and the number of TSDs *in each State*. TSDs in Texas managed the largest amount of waste (17.4 million tons), followed by Louisiana (4.5 million tons), Ohio (1.7 million tons), Mississippi (1.7 million tons), and Kansas (1.6 million tons). Together, the TSDs in these States accounted for 71% of the national management total.

California reported the most TSDs (250), followed by Texas (135), Wisconsin (132), Michigan (113), North Carolina (100), Illinois (86), New Jersey (85), Missouri (83), and New York (73). TSDs in these States constituted 53% of the total number of TSDs. The Navajo Nation reported no TSDs. Vermont, Wyoming, South Dakota, the District of Columbia, Guam, and New Hampshire all reported having TSD facilities but zero management quantities. The TSDs in these States reported storage-only management or the management of wastewaters excluded from the 1997 national reporting logic.

Exhibit 2.7 presents the 50 largest RCRA hazardous waste management facilities in the United States in 1997. Collectively, these TSDs accounted for 84% of the national management total. The largest generator, E.I. Du Pont De Nemours & Co., in Victoria, Texas, also managed the most waste, 4.3 million tons.

Exhibit 2.4 Quantity of RCRA Hazardous Waste Managed and Number of RCRA TSD Facilities, by State, 1997

	HAZARDOUS WASTE QUANTITY [1]			TSD FACILITIES		
STATE	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	14	415,166	1.1	15	44	2.2
ALASKA	12	449,486	1.2	43	6	0.3
ARIZONA	40	4,218	0.0	29	23	1.1
ARKANSAS	10	1,001,426	2.7	29	23	1.1
CALIFORNIA	7	1,160,627	3.1	1	250	12.4
COLORADO	32	37,658	0.1	32	22	1.1
CONNECTICUT	36	26,680	0.1	25	27	1.3
DELAWARE	43	2,131	0.0	47	4	0.2
DISTRICT OF COLUMBIA	50	0	0.0	51	1	0.0
FLORIDA	21	207,560	0.6	14	46	2.3
GEORGIA	26	72,558	0.2	12	55	2.7
GUAM	50	0	0.0	51	1	0.0
HAWAII	49	99	0.0	48	3	0.1
IDAHO	8	1,093,366	2.9	40	7	0.3
ILLINOIS	13	445,728	1.2	6	86	4.2
INDIANA	6	1,357,777	3.6	17	40	2.0
IOWA	42	3,349	0.0	21	28	1.4
KANSAS	5	1,558,943	4.1	27	24	1.2
KENTUCKY	25	85,575	0.2	21	28	1.4
LOUISIANA	2	4,503,985	11.9	11	57	2.8
MAINE	46	718	0.0	29	23	1.1
MARYLAND	39	4,560	0.0	26	25	1.2
MASSACHUSETTS	37	16,467	0.0	21	28	1.4
MICHIGAN	9	1,075,667	2.9	4	113	5.6
MINNESOTA	23	141,292	0.4	27	24	1.2
MISSISSIPPI	4	1,720,718	4.6	36	16	0.8
MISSOURI	20	238,179	0.6	8	83	4.1
MONTANA	45	987	0.0	39	8	0.4
NAVAJO NATION	50	0	0.0	56	0	0.0
NEBRASKA	31	41,231	0.1	38	11	0.5
NEVADA	35	29,313	0.1	43	6	0.3
NEW HAMPSHIRE	50	0	0.0	51	1	0.0
NEW JERSEY	24	86,095	0.2	7	85	4.2
NEW MEXICO	22	189,509	0.5	37	15	0.7
NEW YORK	15	411,616	1.1	9	73	3.6
NORTH CAROLINA	38	15,674	0.0	5	100	4.9
NORTH DAKOTA	44	1,188	0.0	40	7	0.3
OHIO	3	1,739,368	4.6	13	52	2.6
OKLAHOMA	16	405,898	1.1	16	41	2.0
OREGON	33	32,150	0.1	40	7	0.3
PENNSYLVANIA	11	496,136	1.3	10	63	3.1
PUERTO RICO	27	70,188	0.2	21	28	1.4
RHODE ISLAND	41	3,840	0.0	48	3	0.1
SOUTH CAROLINA	19	302,472	0.8	32	22	1.1
SOUTH DAKOTA	50	0	0.0	50	2	0.1
TENNESSEE	17	403,094	1.1	19	30	1.5
TEXAS	1	17,371,102	46.0	2	135	6.7
TRUST TERRITORIES	48	524	0.0	51	1	0.0
UTAH	18	325,888	0.9	35	20	1.0
VERMONT	50	0	0.0	45	5	0.2
VIRGIN ISLANDS	47	659	0.0	51	1	0.0
VIRGINIA	29	47,737	0.1	18	32	1.6
WASHINGTON	28	49,157	0.1	19	30	1.5
WEST VIRGINIA	30	44,438	0.1	32	22	1.1
WISCONSIN	34	30,934	0.1	3	132	6.5
WYOMING	50	0	0.0	45	5	0.2
CBI DATA	N/A	0	N/A	N/A	1	N/A
TOTAL		**37,723,129**	**100.0**		**2,025**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2.5 Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Managed and Number of RCRA TSD Facilities, 1997

STATE	HAZARDOUS WASTE QUANTITY [1]			TSD FACILITIES		
	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
TEXAS	1	17,371,102	46.0	2	135	6.7
LOUISIANA	2	4,503,985	11.9	11	57	2.8
OHIO	3	1,739,368	4.6	13	52	2.6
MISSISSIPPI	4	1,720,718	4.6	36	16	0.8
KANSAS	5	1,558,943	4.1	27	24	1.2
INDIANA	6	1,357,777	3.6	17	40	2.0
CALIFORNIA	7	1,160,627	3.1	1	250	12.4
IDAHO	8	1,093,366	2.9	40	7	0.3
MICHIGAN	9	1,075,667	2.9	4	113	5.6
ARKANSAS	10	1,001,426	2.7	29	23	1.1
PENNSYLVANIA	11	496,136	1.3	10	63	3.1
ALASKA	12	449,486	1.2	43	6	0.3
ILLINOIS	13	445,728	1.2	6	86	4.2
ALABAMA	14	415,166	1.1	15	44	2.2
NEW YORK	15	411,616	1.1	9	73	3.6
OKLAHOMA	16	405,898	1.1	16	41	2.0
TENNESSEE	17	403,094	1.1	19	30	1.5
UTAH	18	325,888	0.9	35	20	1.0
SOUTH CAROLINA	19	302,472	0.8	32	22	1.1
MISSOURI	20	238,179	0.6	8	83	4.1
FLORIDA	21	207,560	0.6	14	46	2.3
NEW MEXICO	22	189,509	0.5	37	15	0.7
MINNESOTA	23	141,292	0.4	27	24	1.2
NEW JERSEY	24	86,095	0.2	7	85	4.2
KENTUCKY	25	85,575	0.2	21	28	1.4
GEORGIA	26	72,558	0.2	12	55	2.7
PUERTO RICO	27	70,188	0.2	21	28	1.4
WASHINGTON	28	49,157	0.1	19	30	1.5
VIRGINIA	29	47,737	0.1	18	32	1.6
WEST VIRGINIA	30	44,438	0.1	32	22	1.1
NEBRASKA	31	41,231	0.1	38	11	0.5
COLORADO	32	37,658	0.1	32	22	1.1
OREGON	33	32,150	0.1	40	7	0.3
WISCONSIN	34	30,934	0.1	3	132	6.5
NEVADA	35	29,313	0.1	43	6	0.3
CONNECTICUT	36	26,680	0.1	25	27	1.3
MASSACHUSETTS	37	16,467	0.0	21	28	1.4
NORTH CAROLINA	38	15,674	0.0	5	100	4.9
MARYLAND	39	4,560	0.0	26	25	1.2
ARIZONA	40	4,218	0.0	29	23	1.1
RHODE ISLAND	41	3,840	0.0	48	3	0.1
IOWA	42	3,349	0.0	21	28	1.4
DELAWARE	43	2,131	0.0	47	4	0.2
NORTH DAKOTA	44	1,188	0.0	40	7	0.3
MONTANA	45	987	0.0	39	8	0.4
MAINE	46	718	0.0	29	23	1.1
VIRGIN ISLANDS	47	659	0.0	51	1	0.0
TRUST TERRITORIES	48	524	0.0	51	1	0.0
HAWAII	49	99	0.0	48	3	0.1
DISTRICT OF COLUMBIA	50	0	0.0	51	1	0.0
GUAM	50	0	0.0	51	1	0.0
NAVAJO NATION	50	0	0.0	56	0	0.0
NEW HAMPSHIRE	50	0	0.0	51	1	0.0
SOUTH DAKOTA	50	0	0.0	50	2	0.1
VERMONT	50	0	0.0	45	5	0.2
WYOMING	50	0	0.0	45	5	0.2
CBI DATA	N/A	0	N/A	N/A	1	N/A
TOTAL		**37,723,129**	**100.0**		**2,025**	**100.0**

[1]Quantity managed only by storage is excluded.
Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2.6 Rank Ordering of States Based on Number of RCRA TSD Facilities and Quantity of RCRA Hazardous Waste Managed, 1997

	TSD FACILITIES			HAZARDOUS WASTE QUANTITY [1]		
STATE	RANK	NUMBER	PERCENTAGE	RANK	TONS MANAGED	PERCENTAGE
CALIFORNIA	1	250	12.4	7	1,160,627	3.1
TEXAS	2	135	6.7	1	17,371,102	46.0
WISCONSIN	3	132	6.5	34	30,934	0.1
MICHIGAN	4	113	5.6	9	1,075,667	2.9
NORTH CAROLINA	5	100	4.9	38	15,674	0.0
ILLINOIS	6	86	4.2	13	445,728	1.2
NEW JERSEY	7	85	4.2	24	86,095	0.2
MISSOURI	8	83	4.1	20	238,179	0.6
NEW YORK	9	73	3.6	15	411,616	1.1
PENNSYLVANIA	10	63	3.1	11	496,136	1.3
LOUISIANA	11	57	2.8	2	4,503,985	11.9
GEORGIA	12	55	2.7	26	72,558	0.2
OHIO	13	52	2.6	3	1,739,368	4.6
FLORIDA	14	46	2.3	21	207,560	0.6
ALABAMA	15	44	2.2	14	415,166	1.1
OKLAHOMA	16	41	2.0	16	405,898	1.1
INDIANA	17	40	2.0	6	1,357,777	3.6
VIRGINIA	18	32	1.6	29	47,737	0.1
TENNESSEE	19	30	1.5	17	403,094	1.1
WASHINGTON	19	30	1.5	28	49,157	0.1
IOWA	21	28	1.4	42	3,349	0.0
KENTUCKY	21	28	1.4	25	85,575	0.2
MASSACHUSETTS	21	28	1.4	37	16,467	0.0
PUERTO RICO	21	28	1.4	27	70,188	0.2
CONNECTICUT	25	27	1.3	36	26,680	0.1
MARYLAND	26	25	1.2	39	4,560	0.0
KANSAS	27	24	1.2	5	1,558,943	4.1
MINNESOTA	27	24	1.2	23	141,292	0.4
ARIZONA	29	23	1.1	40	4,218	0.0
ARKANSAS	29	23	1.1	10	1,001,426	2.7
MAINE	29	23	1.1	46	718	0.0
COLORADO	32	22	1.1	32	37,658	0.1
SOUTH CAROLINA	32	22	1.1	19	302,472	0.8
WEST VIRGINIA	32	22	1.1	30	44,438	0.1
UTAH	35	20	1.0	18	325,888	0.9
MISSISSIPPI	36	16	0.8	4	1,720,718	4.6
NEW MEXICO	37	15	0.7	22	189,509	0.5
NEBRASKA	38	11	0.5	31	41,231	0.1
MONTANA	39	8	0.4	45	987	0.0
IDAHO	40	7	0.3	8	1,093,366	2.9
NORTH DAKOTA	40	7	0.3	44	1,188	0.0
OREGON	40	7	0.3	33	32,150	0.1
ALASKA	43	6	0.3	12	449,486	1.2
NEVADA	43	6	0.3	35	29,313	0.1
VERMONT	45	5	0.2	50	0	0.0
WYOMING	45	5	0.2	50	0	0.0
DELAWARE	47	4	0.2	43	2,131	0.0
HAWAII	48	3	0.1	49	99	0.0
RHODE ISLAND	48	3	0.1	41	3,840	0.0
SOUTH DAKOTA	50	2	0.1	50	0	0.0
DISTRICT OF COLUMBIA	51	1	0.0	50	0	0.0
GUAM	51	1	0.0	50	0	0.0
NEW HAMPSHIRE	51	1	0.0	50	0	0.0
TRUST TERRITORIES	51	1	0.0	48	524	0.0
VIRGIN ISLANDS	51	1	0.0	47	659	0.0
NAVAJO NATION	56	0	0.0	50	0	0.0
CBI DATA	N/A	1	N/A	N/A	0	N/A
TOTAL		**2,025**	**100.0**		**37,723,129**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2.7 Fifty Largest RCRA Hazardous Waste Managers in the U.S., 1997

RANK	EPA ID	NAME	CITY	TONS MANAGED[1]
1	TXD008123317	DU PONT DE NEMOURS & CO., E.I.	VICTORIA, TX	4,305,035
2	TXD001700806	CHOCOLATE BAYOU PLANT	ALVIN, TX	2,607,238
3	TXD008080533	TEXAS CITY REFINERY - AMOCO OIL CO	TEXAS CITY, TX	2,606,101
4	LAD008175390	CYTEC INDUSTRIES INC	WAGGAMAN, LA	1,843,383
5	TXD008081101	BEAUMONT WORKS	BEAUMONT, TX	1,619,091
6	LAD008213191	RUBICON INC	GEISMAR, LA	1,529,616
7	KSD007482029	VULCAN MATERIALS CO	WICHITA, KS	1,437,349
8	TXD059685339	DIAMOND SHAMROCK REFINING COMPANY - MCKE	SUNRAY, TX	1,330,088
9	MSD096046792	E.I. DUPONT DE NEMOURS & CO. DELISLE PLA	PASS CHRISTIAN, MS	1,180,595
10	TXD000751172	GREEN LAKE FACILITY	BLOOMINGTON, TX	1,110,166
11	IDD070929518	FMC CORP PHOSPHORUS CHEMICALS	POCATELLO, ID	1,010,329
12	TXD008079527	STERLING CHEMICALS, INC.	TEXAS CITY, TX	1,004,873
13	OHD042157644	BP CHEMICALS INC	LIMA, OH	1,001,101
14	ARD043195429	GREAT LAKES CHEMICAL CORPORATION	EL DORADO, AR	750,900
15	CAD009452657	ROMIC ENVIRONMENTAL TECHNOLOGIES, INC.	EAST PALO ALTO, CA	701,508
16	MSD008186587	MORTON INTERNATIONAL, INC	MOSS POINT, MS	492,270
17	TXD007330202	EASTMAN CHEMICAL COMPANY	LONGVIEW, TX	484,817
18	LAD001890367	DUPONT & DUPONT DOW ELASTOMERS INC	LAPLACE, LA	455,630
19	AKD048679682	TESORO ALASKA PETROLEUM CO KENAI REFINE	KENAI, AK	449,479
20	TXD078432457	CELANESE LTD. CLEAR LAKE PLANT	PASADENA, TX	403,475
21	TXD083472266	ARCO CHEMICAL	CHANNELVIEW, TX	361,061
22	IND003913423	BETHLEHEM STEEL CORP	CHESTERTON, IN	349,765
23	TXD087491973	SOUTHWESTERN COPPER DIV; AMARILLO COPPER	AMARILLO, TX	288,276
24	MID000724831	MICHIGAN DISPOSAL WASTE TREATMENT PLANT	BELLEVILLE, MI	281,184
25	OKD000829440	ZINC CORPORATION OF AMERICA	BARTLESVILLE, OK	269,167
26	TXD008081697	BASF CORPORATION	FREEPORT, TX	256,234
27	OHD045243706	ENVIROSAFE SERVICES OF OHIO INC	OREGON, OH	213,669
28	UT3213820894	TOOELE ARMY DEPOT	TOOELE, UT	201,521
29	LAD000777201	CHEMICAL WASTE MANAGEMENT	SULPHUR, LA	193,215
30	NMD089416416	GIANT REFINING COMPANY - BLOOMFIELD	BLOOMFIELD, NM	189,490
31	MID006013643	PARKE-DAVIS, DIV. OF WARNER-LAMBERT CO.	HOLLAND, MI	177,771
32	TXD000719518	DISPOSAL SYSTEMS INC.	DEER PARK, TX	177,535
33	TND003376928	TENN EASTMAN DIVISION OF EASTMAN CHEMICA	KINGSPORT, TN	176,053
34	MID048090633	WAYNE DISPOSAL, INC.	BELLEVILLE, MI	173,513
35	NYD049836679	CWM CHEMICAL SERVICES, L.L.C.	MODEL CITY, NY	169,947
36	TXD008092793	DOW CHEMICAL COMPANY - OYSTER CREEK SITE	FREEPORT, TX	161,854
37	CAD066233966	QUEMETCO INC.	CITY OF INDUSTRY, CA	154,752
38	ILD000805812	PEORIA DISPOSAL CO INC	PEORIA, IL	150,921
39	SCD070375985	LAIDLAW ENV SVS OF SC INC	PINEWOOD, SC	142,052
40	ALD046481032	SANDERS LEAD COMPANY INC	TROY, AL	141,200
41	IND000810861	AMOCO OIL CO WHITING LAKEFRONT	WHITING, IN	137,252
42	TND981922826	LAIDLAW ENVIRONMENTAL SERVICES OF NASHVI	NASHVILLE, TN	135,149
43	NYD030485288	REVERE SMELTING & REFINING CORPORATION	MIDDLETOWN, NY	134,210
44	IND000199653	QUEMETCO	INDIANAPOLIS, IN	127,699
45	OHD020273819	WASTE MANAGEMENT OF OHIO INC	VICKERY, OH	126,722
46	IND078911146	CHEMICAL WASTE MANAGEMENT OF INDIANA LLC	FORT WAYNE, IN	126,203
47	TXD055141378	SAFETY-KLEEN (DEER PARK), INC.	DEER PARK, TX	125,825
48	OKD065438376	LAIDLAW ENVIRONMENTAL SERVICES,INC LONE	WAYNOKA, OK	121,592
49	FLD004106811	KAISER ALUMINUM & CHEMICAL CORP	MULBERRY, FL	120,009
50	MND006148092	GOPHER RESOURCE CORP	EAGAN, MN	112,513
TOTAL				**31,819,397**

[1] Quantity managed only by storage is excluded.

Note: Column may not sum due to rounding.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Large TSDs in the five (5) States which managed the most waste, Texas, Louisiana, Ohio, Mississippi, and Kansas, also accounted for the majority of each State's management totals. Fifteen (15) Texas TSDs managed 45% of the national management total and 97% of the State's management total. The largest Louisiana facilities managed 11% of the national management total and accounted for 89% of the State's management total. The three (3) Ohio TSDs managed 77% of the hazardous waste managed in Ohio. In Mississippi, the two (2) largest TSDs managed 97% of the State's management total. The one (1) Kansas TSD managed nearly all of the waste managed in the State, 1 million tons or 92% of the State total.

Exhibits 2.8, 2.9, and 2.10 provide an overview of the various management methods and quantity of waste managed by each method. As stated earlier, all wastewaters were excluded from the 1997 National Report data, therefore, most management methods employed for managing the wastewater (including aqueous treatment units and direct discharge to sewer/POTW or to surface water under NPDES) have also been excluded from this Report. However, wastes managed in Deepwell/Underground Injection (M134) are included in this Report.

Land disposal accounted for 76% of the national non-wastewater management total. The land disposal units and quantity managed by method include:

Deepwell/Underground Injection	26 million tons
Landfill	1.5 million tons
Surface Impoundment	1 million tons
Land Treatment/Application/Farming	19 thousand tons

Recovery operations represented 10% of the national non-wastewater management total. The methods defined as recovery operations and the quantity managed by each method include:

Fuel Blending	1.5 million tons
Metals Recovery (for Reuse)	1.1 million tons
Solvents Recovery	617 thousand tons
Other Recovery	443 thousand tons

Exhibit 2.8 Quantity of RCRA Hazardous Waste Managed, by Management Method, 1997

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2]	PERCENTAGE OF FACILITIES[2]
METALS RECOVERY (FOR REUSE)	M011-M019	1,077,691	2.9	96	15.3
SOLVENTS RECOVERY	M021-M029	617,273	1.6	154	24.6
OTHER RECOVERY	M031-M039	443,095	1.2	52	8.3
INCINERATION	M041-M049	1,656,331	4.4	166	26.5
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	1,697,568	4.5	116	18.5
FUEL BLENDING	M061	1,463,734	3.9	93	14.9
SLUDGE TREATMENT	M101-M109	411,228	1.1	31	5.0
STABILIZATION	M111-M119	1,364,716	3.6	87	13.9
LAND TREATMENT / APPLICATION / FARMING	M131	19,434	0.1	9	1.4
LANDFILL	M132	1,526,829	4.0	70	11.2
SURFACE IMPOUNDMENT	M133	1,011,613	2.7	2	0.3
DEEPWELL / UNDERGROUND INJECTION	M134	26,182,310	69.4	49	7.8
OTHER DISPOSAL SPECIFIED IN COMMENTS ON FORM	M137	251,135	0.7	46	7.3
UNKNOWN SYSTEM DUE TO INVALID CODE		172	0.0	3	0.5
TOTAL		**37,723,129**	**100.0**	**626**	**100.0**

[1] Facilities reporting storage only and their quantity managed are excluded.
[2] Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.
CBI data excluded from exhibit.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2.9 Management Method, by Quantity of RCRA Hazardous Waste Managed, 1997

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2]	PERCENTAGE OF FACILITIES[2]
DEEPWELL / UNDERGROUND INJECTION	M134	26,182,310	69.4	49	7.8
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	1,697,568	4.5	116	18.5
INCINERATION	M041-M049	1,656,331	4.4	166	26.5
LANDFILL	M132	1,526,829	4.0	70	11.2
FUEL BLENDING	M061	1,463,734	3.9	93	14.9
STABILIZATION	M111-M119	1,364,716	3.6	87	13.9
METALS RECOVERY (FOR REUSE)	M011-M019	1,077,691	2.9	96	15.3
SURFACE IMPOUNDMENT	M133	1,011,613	2.7	2	0.3
SOLVENTS RECOVERY	M021-M029	617,273	1.6	154	24.6
OTHER RECOVERY	M031-M039	443,095	1.2	52	8.3
SLUDGE TREATMENT	M101-M109	411,228	1.1	31	5.0
OTHER DISPOSAL SPECIFIED IN COMMENTS ON FORM	M137	251,135	0.7	46	7.3
LAND TREATMENT / APPLICATION / FARMING	M131	19,434	0.1	9	1.4
UNKNOWN SYSTEM DUE TO INVALID CODE		172	0.0	3	0.5
TOTAL		**37,723,129**	**100.0**	**626**	**100.0**

[1] Facilities reporting storage only and their quantity managed are excluded.
[2] Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.
CBI data excluded from exhibit.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2.10 Management Method and Quantity of RCRA Hazardous Waste Managed, by Number of Facilities, 1997

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2]	PERCENTAGE OF FACILITIES[2]
INCINERATION	M041-M049	1,656,331	4.4	166	26.5
SOLVENTS RECOVERY	M021-M029	617,273	1.6	154	24.6
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	1,697,568	4.5	116	18.5
METALS RECOVERY (FOR REUSE)	M011-M019	1,077,691	2.9	96	15.3
FUEL BLENDING	M061	1,463,734	3.9	93	14.9
STABILIZATION	M111-M119	1,364,716	3.6	87	13.9
LANDFILL	M132	1,526,829	4.0	70	11.2
OTHER RECOVERY	M031-M039	443,095	1.2	52	8.3
DEEPWELL / UNDERGROUND INJECTION	M134	26,182,310	69.4	49	7.8
OTHER DISPOSAL SPECIFIED IN COMMENTS ON FORM	M137	251,135	0.7	46	7.3
SLUDGE TREATMENT	M101-M109	411,228	1.1	31	5.0
LAND TREATMENT / APPLICATION / FARMING	M131	19,434	0.1	9	1.4
UNKNOWN SYSTEM DUE TO INVALID CODE		172	0.0	3	0.5
SURFACE IMPOUNDMENT	M133	1,011,613	2.7	2	0.3
TOTAL		**37,723,129**	**100.0**	**626**	**100.0**

[1] Facilities reporting storage only and their quantity managed are excluded.
[2] Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.
CBI data excluded from exhibit.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Thermal treatment accounted for 9% of the national non-wastewater management total. Thermal treatment methods include:

Energy Recovery (for Reuse as Fuel)	1.7 million tons
Incineration	1.7 million tons

The remaining non-wastewater management quantities (5%) were managed in *other treatment and disposal units*, including:

Stabilization	1.4 million tons
Sludge Treatment	411 thousand tons
Other Disposal (Specified in Comments)	251 thousand tons

Exhibits 2.11, 2.12, and 2.13 present the management methods used for treating or disposing of **wastes received from off-site** and the quantity managed by each method. In 1997, 6.8 million tons (18% of the national management total) of waste was received from off-site and subsequently managed on-site in treatment and disposal units. As stated earlier, all wastewaters were excluded from the 1997 National Report data, therefore, most management methods employed for managing the wastewater (including aqueous treatment units and direct discharge to sewer/POTW or to surface water under NPDES) have also been excluded from this Report. However, wastes managed in Deepwell/Underground Injection (M134) are included in this Report.

Recovery operations were used to manage 41% of the non-wastewater **waste received from off-site** and managed on-site. Recovery operations include:

Fuel Blending	1.3 million tons
Metals Recovery (for Reuse)	820 thousand tons
Solvents Recovery	531 thousand tons
Other Recovery	103 thousand tons

Exhibit 2.11 Quantity of RCRA Hazardous Waste Managed, by Management Method, Limited to Waste Received from Off-Site, 1997

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2]	PERCENTAGE OF FACILITIES[2]
METALS RECOVERY (FOR REUSE)	M011-M019	819,868	12.0	70	22.6
SOLVENTS RECOVERY	M021-M029	530,703	7.8	59	19.0
OTHER RECOVERY	M031-M039	102,446	1.5	30	9.7
INCINERATION	M041-M049	531,693	7.8	82	26.5
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	901,439	13.2	49	15.8
FUEL BLENDING	M061	1,324,814	19.5	90	29.0
SLUDGE TREATMENT	M101-M109	20,025	0.3	11	3.5
STABILIZATION	M111-M119	1,119,623	16.4	47	15.2
LAND TREATMENT / APPLICATION / FARMING	M131	0	0.0	2	0.6
LANDFILL	M132	946,673	13.9	43	13.9
DEEPWELL / UNDERGROUND INJECTION	M134	488,340	7.2	17	5.5
OTHER DISPOSAL SPECIFIED IN COMMENTS ON FORM	M137	25,295	0.4	25	8.1
TOTAL		**6,810,921**	**100.0**	**310**	

[1] Facilities reporting storage only and their quantity managed are excluded.
[2] Column may not sum because facilities may have multiple handling methods.

Note: Columns may not sum due to rounding.
CBI data excluded from exhibit.

Exhibit 2.12 Management Method, by Quantity of RCRA Hazardous Waste Managed, Limited to Waste Received from Off-Site, 1997

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2]	PERCENTAGE OF FACILITIES[2]
FUEL BLENDING	M061	1,324,814	19.5	90	29.0
STABILIZATION	M111-M119	1,119,623	16.4	47	15.2
LANDFILL	M132	946,673	13.9	43	13.9
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	901,439	13.2	49	15.8
METALS RECOVERY (FOR REUSE)	M011-M019	819,868	12.0	70	22.6
INCINERATION	M041-M049	531,693	7.8	82	26.5
SOLVENTS RECOVERY	M021-M029	530,703	7.8	59	19.0
DEEPWELL / UNDERGROUND INJECTION	M134	488,340	7.2	17	5.5
OTHER RECOVERY	M031-M039	102,446	1.5	30	9.7
OTHER DISPOSAL SPECIFIED IN COMMENTS ON FORM	M137	25,295	0.4	25	8.1
SLUDGE TREATMENT	M101-M109	20,025	0.3	11	3.5
LAND TREATMENT / APPLICATION / FARMING	M131	0	0.0	2	0.6
TOTAL		**6,810,921**	**100.0**	**310**	

[1] Facilities reporting storage only and their quantity managed are excluded.
[2] Column may not sum because facilities may have multiple handling methods.
Note: Columns may not sum due to rounding. CBI data excluded from exhibit.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 2.13 Management Method and Quantity of RCRA Hazardous Waste Managed, by Number of Facilities, Limited to Waste Received from Off-Site, 1997

MANAGEMENT METHOD	SYSTEM TYPE CODE	TONS MANAGED[1]	PERCENTAGE OF QUANTITY	NUMBER OF FACILITIES[2]	PERCENTAGE OF FACILITIES[2]
FUEL BLENDING	M061	1,324,814	19.5	90	29.0
INCINERATION	M041-M049	531,693	7.8	82	26.5
METALS RECOVERY (FOR REUSE)	M011-M019	819,868	12.0	70	22.6
SOLVENTS RECOVERY	M021-M029	530,703	7.8	59	19.0
ENERGY RECOVERY (REUSE AS FUEL)	M051-M059	901,439	13.2	49	15.8
STABILIZATION	M111-M119	1,119,623	16.4	47	15.2
LANDFILL	M132	946,673	13.9	43	13.9
OTHER RECOVERY	M031-M039	102,446	1.5	30	9.7
OTHER DISPOSAL SPECIFIED IN COMMENTS ON FORM	M137	25,295	0.4	25	8.1
DEEPWELL / UNDERGROUND INJECTION	M134	488,340	7.2	17	5.5
SLUDGE TREATMENT	M101-M109	20,025	0.3	11	3.5
LAND TREATMENT / APPLICATION / FARMING	M131	0	0.0	2	0.6
TOTAL		**6,810,921**	**100.0**	**310**	

[1] Facilities reporting storage only and their quantity managed are excluded.
[2] Column may not sum because facilities may have multiple handling methods.
Note: Columns may not sum due to rounding. CBI data excluded from exhibit.

Land disposal units accounted for 21% of the national non-wastewater management total for **waste received from off-site** and subsequently managed on-site. Land disposal units include:

Landfill	947 thousand tons
Deepwell/Underground Injection	488 thousand tons

Thermal treatment also accounted for 21% of the national management total for **waste received from off-site** and subsequently managed on-site. Thermal treatment units include:

Energy Recovery (Reuse as Fuel)	901 thousand tons
Incineration	532 thousand tons

Other treatment and disposal units were used to manage the remaining 17% of the national non-wastewater management total for **wastes received from off-site** and managed on-site. Other treatment and disposal units include:

Stabilization	1.1 million tons
Other Disposal	25 thousand tons
Sludge treatment	20 thousand tons

A comparison of the management profile for all wastes and for wastes received from off-site shows that wastes managed off-site are managed differently. Most wastes managed on-site were managed in Deepwell/Underground Injection. The majority of wastes received from off-site were managed by Fuel Blending, Stabilization, or Landfill.

3.0 SHIPMENTS AND RECEIPTS

The following section provides an overview of the 1997 RCRA hazardous waste shipping[7] and receiving data through a series of exhibits and textual summaries. For a complete description of this section's contents, please refer to the *Executive Summary* sections entitled "RCRA Hazardous Waste" and "RCRA Hazardous Waste Shipments and Receipts."

In 1997, 18,029 shippers reported shipping (either within the State or between States) 7.3 million tons of RCRA hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of shippers decreased by 2,468, and the quantity of waste shipped decreased by 3.3 million tons or 31%. Some of the decrease in the quantity of waste shipped may be attributable to the exclusion of wastewaters from the 1997 National Biennial Report data. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the Biennial Report Data Presented in this Report."

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of this Report provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.3, 6.2 million tons of non-wastewater wastes were shipped in 1995; therefore, a more accurate picture of the change in national hazardous waste shipments between 1995 and 1997 is a decrease of 1.1 million tons or 15%.

Exhibits 3.1, 3.2, and 3.3 present the quantity of waste shipped and the number of shippers *in each EPA Region*[8]. Region 5 reported the largest number of shippers (3,988) and also reported shipping the greatest amount of waste, 2.3 million tons or 31% of the national shipment total. Region 8 reported the fewest shippers (335), while shippers in Region 10 reported shipping the least amount of waste (147 thousand tons).

---

[7] The term "shipment" refers to the physical transfer of waste from one facility to another. In some instances, waste is transferred within a physical location that has more than one EPA Identification Number. These waste transfers are treated as shipments.

[8] Appendix A includes a list of States by EPA Region.

Exhibit 3.1 Number and Percentage of Hazardous Waste Shippers and Total RCRA Hazardous Waste Quantity Shipped, by EPA Region, 1997

	HAZARDOUS WASTE QUANTITY		SHIPPERS	
EPA REGION	TONS SHIPPED	PERCENTAGE	NUMBER	PERCENTAGE
1	222,592	3.0	1,273	7.1
2	478,851	6.5	2,711	15.0
3	635,020	8.7	1,794	10.0
4	911,849	12.4	2,390	13.3
5	2,259,950	30.8	3,988	22.1
6	1,542,634	21.0	1,879	10.4
7	350,519	4.8	806	4.5
8	149,219	2.0	335	1.9
9	634,453	8.7	2,017	11.2
10	147,303	2.0	834	4.6
CBI DATA	142	N/A	2	N/A
TOTAL	**7,332,532**	**100.0**	**18,029**	**100.0**

Exhibit 3.2 Number and Percentage of Hazardous Waste Shippers and Total Quantity of RCRA Hazardous Waste Shipped by Region, by the Total Quantity of Waste Shipped, 1997

	HAZARDOUS WASTE QUANTITY		SHIPPERS	
EPA REGION	TONS SHIPPED	PERCENTAGE	NUMBER	PERCENTAGE
5	2,259,950	30.8	3,988	22.1
6	1,542,634	21.0	1,879	10.4
4	911,849	12.4	2,390	13.3
3	635,020	8.7	1,794	10.0
9	634,453	8.7	2,017	11.2
2	478,851	6.5	2,711	15.0
7	350,519	4.8	806	4.5
1	222,592	3.0	1,273	7.1
8	149,219	2.0	335	1.9
10	147,303	2.0	834	4.6
CBI DATA	142	N/A	2	N/A
TOTAL	**7,332,532**	**100.0**	**18,029**	**100.0**

Note: Columns for these two exhibits may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.3 Number and Percentage of Hazardous Waste Shippers and Total Quantity of RCRA Hazardous Waste Shipped by Region, by Highest Number of Shippers, 1997

	SHIPPERS		HAZARDOUS WASTE QUANTITY	
EPA REGION	NUMBER	PERCENTAGE	TONS SHIPPED	PERCENTAGE
5	3,988	22.1	2,259,950	30.8
2	2,711	15.0	478,851	6.5
4	2,390	13.3	911,849	12.4
9	2,017	11.2	634,453	8.7
6	1,879	10.4	1,542,634	21.0
3	1,794	10.0	635,020	8.7
1	1,273	7.1	222,592	3.0
10	834	4.6	147,303	2.0
7	806	4.5	350,519	4.8
8	335	1.9	149,219	2.0
CBI DATA	2	N/A	142	N/A
TOTAL	**18,029**	**100.0**	**7,332,532**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Exhibits 3.4, 3.5, and 3.6 present the quantity of RCRA hazardous waste shipped and the number of shippers *in each State*. New York reported the most shippers (1,856), followed by California (1,713), Ohio (1,165), Texas (1,155), Pennsylvania (1,009), Illinois (972), New Jersey (749), and Michigan (632). Shippers in these States constituted 51% of the total number of shippers. South Carolina reported no shippers or shipments in 1997. Texas reported shipping the most waste, 1 million tons or 14% of the national shipment total. Ohio (564 thousand tons), California (564 thousand tons), Michigan (541 thousand tons), Minnesota (425 thousand tons), Indiana (365 thousand tons), Pennsylvania (311 thousand tons), and Illinois (292 thousand tons) were also among the top States in quantity of waste shipped. Shippers in these States accounted for 56% of the national shipment total. The 50 largest shippers in the United States are presented in Exhibit 3.7, and their shipments accounted for 37% of the national shipment total in 1997.

Exhibit 3.4 Quantity of RCRA Hazardous Waste Shipped and Number of Hazardous Waste Shippers, by State, 1997

STATE	HAZARDOUS WASTE QUANTITY			SHIPPERS		
	RANK	TONS SHIPPED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	13	209,200	2.9	23	263	1.5
ALASKA	45	4,609	0.1	43	48	0.3
ARIZONA	31	57,088	0.8	30	170	0.9
ARKANSAS	12	216,953	3.0	26	196	1.1
CALIFORNIA	3	563,673	7.7	2	1,713	9.5
COLORADO	32	53,370	0.7	31	153	0.8
CONNECTICUT	29	73,515	1.0	13	384	2.1
DELAWARE	36	16,779	0.2	41	63	0.3
DISTRICT OF COLUMBIA	53	499	0.0	49	20	0.1
FLORIDA	24	86,783	1.2	16	370	2.1
GEORGIA	9	253,131	3.5	14	376	2.1
GUAM	54	302	0.0	52	7	0.0
HAWAII	47	2,548	0.0	47	34	0.2
IDAHO	46	2,845	0.0	45	45	0.2
ILLINOIS	8	292,148	4.0	6	972	5.4
INDIANA	6	364,913	5.0	9	592	3.3
IOWA	25	84,693	1.2	29	176	1.0
KANSAS	16	137,709	1.9	25	207	1.1
KENTUCKY	14	190,550	2.6	20	328	1.8
LOUISIANA	10	239,401	3.3	19	350	1.9
MAINE	44	5,104	0.1	34	137	0.8
MARYLAND	20	100,658	1.4	21	298	1.7
MASSACHUSETTS	17	121,390	1.7	12	443	2.5
MICHIGAN	4	541,142	7.4	8	632	3.5
MINNESOTA	5	424,611	5.8	24	258	1.4
MISSISSIPPI	35	21,473	0.3	28	188	1.0
MISSOURI	19	112,592	1.5	18	355	2.0
MONTANA	40	8,924	0.1	44	46	0.3
NAVAJO NATION	55	160	0.0	53	6	0.0
NEBRASKA	37	15,525	0.2	40	68	0.4
NEVADA	38	10,075	0.1	39	84	0.5
NEW HAMPSHIRE	41	7,656	0.1	32	142	0.8
NEW JERSEY	15	158,068	2.2	7	749	4.2
NEW MEXICO	42	5,637	0.1	46	39	0.2
NEW YORK	11	221,137	3.0	1	1,856	10.3
NORTH CAROLINA	27	75,758	1.0	11	494	2.7
NORTH DAKOTA	49	1,553	0.0	50	15	0.1
OHIO	2	563,706	7.7	3	1,165	6.5
OKLAHOMA	33	48,137	0.7	33	139	0.8
OREGON	34	39,784	0.5	27	192	1.1
PENNSYLVANIA	7	310,601	4.2	5	1,009	5.6
PUERTO RICO	22	97,587	1.3	36	104	0.6
RHODE ISLAND	39	9,747	0.1	36	104	0.6
SOUTH CAROLINA	56	0	0.0	56	0	0.0
SOUTH DAKOTA	51	956	0.0	48	21	0.1
TENNESSEE	28	74,954	1.0	15	371	2.1
TEXAS	1	1,032,505	14.1	4	1,155	6.4
TRUST TERRITORIES	52	607	0.0	54	3	0.0
UTAH	26	83,191	1.1	38	86	0.5
VERMONT	43	5,181	0.1	41	63	0.3
VIRGIN ISLANDS	48	2,059	0.0	55	2	0.0
VIRGINIA	23	93,333	1.3	22	289	1.6
WASHINGTON	21	100,065	1.4	10	549	3.0
WEST VIRGINIA	18	113,150	1.5	35	115	0.6
WISCONSIN	30	73,429	1.0	17	369	2.0
WYOMING	50	1,227	0.0	51	14	0.1
CBI DATA	N/A	142	N/A	N/A	2	N/A
TOTAL		**7,332,532**	**100.0**		**18,029**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.5 Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Shipped and Number of Hazardous Waste Shippers, 1997

STATE	HAZARDOUS WASTE QUANTITY			SHIPPERS		
	RANK	TONS SHIPPED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
TEXAS	1	1,032,505	14.1	4	1,155	6.4
OHIO	2	563,706	7.7	3	1,165	6.5
CALIFORNIA	3	563,673	7.7	2	1,713	9.5
MICHIGAN	4	541,142	7.4	8	632	3.5
MINNESOTA	5	424,611	5.8	24	258	1.4
INDIANA	6	364,913	5.0	9	592	3.3
PENNSYLVANIA	7	310,601	4.2	5	1,009	5.6
ILLINOIS	8	292,148	4.0	6	972	5.4
GEORGIA	9	253,131	3.5	14	376	2.1
LOUISIANA	10	239,401	3.3	19	350	1.9
NEW YORK	11	221,137	3.0	1	1,856	10.3
ARKANSAS	12	216,953	3.0	26	196	1.1
ALABAMA	13	209,200	2.9	23	263	1.5
KENTUCKY	14	190,550	2.6	20	328	1.8
NEW JERSEY	15	158,068	2.2	7	749	4.2
KANSAS	16	137,709	1.9	25	207	1.1
MASSACHUSETTS	17	121,390	1.7	12	443	2.5
WEST VIRGINIA	18	113,150	1.5	35	115	0.6
MISSOURI	19	112,592	1.5	18	355	2.0
MARYLAND	20	100,658	1.4	21	298	1.7
WASHINGTON	21	100,065	1.4	10	549	3.0
PUERTO RICO	22	97,587	1.3	36	104	0.6
VIRGINIA	23	93,333	1.3	22	289	1.6
FLORIDA	24	86,783	1.2	16	370	2.1
IOWA	25	84,693	1.2	29	176	1.0
UTAH	26	83,191	1.1	38	86	0.5
NORTH CAROLINA	27	75,758	1.0	11	494	2.7
TENNESSEE	28	74,954	1.0	15	371	2.1
CONNECTICUT	29	73,515	1.0	13	384	2.1
WISCONSIN	30	73,429	1.0	17	369	2.0
ARIZONA	31	57,088	0.8	30	170	0.9
COLORADO	32	53,370	0.7	31	153	0.8
OKLAHOMA	33	48,137	0.7	33	139	0.8
OREGON	34	39,784	0.5	27	192	1.1
MISSISSIPPI	35	21,473	0.3	28	188	1.0
DELAWARE	36	16,779	0.2	41	63	0.3
NEBRASKA	37	15,525	0.2	40	68	0.4
NEVADA	38	10,075	0.1	39	84	0.5
RHODE ISLAND	39	9,747	0.1	36	104	0.6
MONTANA	40	8,924	0.1	44	46	0.3
NEW HAMPSHIRE	41	7,656	0.1	32	142	0.8
NEW MEXICO	42	5,637	0.1	46	39	0.2
VERMONT	43	5,181	0.1	41	63	0.3
MAINE	44	5,104	0.1	34	137	0.8
ALASKA	45	4,609	0.1	43	48	0.3
IDAHO	46	2,845	0.0	45	45	0.2
HAWAII	47	2,548	0.0	47	34	0.2
VIRGIN ISLANDS	48	2,059	0.0	55	2	0.0
NORTH DAKOTA	49	1,553	0.0	50	15	0.1
WYOMING	50	1,227	0.0	51	14	0.1
SOUTH DAKOTA	51	956	0.0	48	21	0.1
TRUST TERRITORIES	52	607	0.0	54	3	0.0
DISTRICT OF COLUMBIA	53	499	0.0	49	20	0.1
GUAM	54	302	0.0	52	7	0.0
NAVAJO NATION	55	160	0.0	53	6	0.0
SOUTH CAROLINA	56	0	0.0	56	0	0.0
CBI DATA	N/A	142	N/A	N/A	2	N/A
TOTAL		**7,332,532**	**100.0**		**18,029**	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.6 Rank Ordering of States Based on Number of Hazardous Waste Shippers and Quantity of RCRA Hazardous Waste Shipped, 1997

	SHIPPERS			HAZARDOUS WASTE QUANTITY		
STATE	RANK	NUMBER	PERCENTAGE	RANK	TONS SHIPPED	PERCENTAGE
NEW YORK	1	1,856	10.3	11	221,137	3.0
CALIFORNIA	2	1,713	9.5	3	563,673	7.7
OHIO	3	1,165	6.5	2	563,706	7.7
TEXAS	4	1,155	6.4	1	1,032,505	14.1
PENNSYLVANIA	5	1,009	5.6	7	310,601	4.2
ILLINOIS	6	972	5.4	8	292,148	4.0
NEW JERSEY	7	749	4.2	15	158,068	2.2
MICHIGAN	8	632	3.5	4	541,142	7.4
INDIANA	9	592	3.3	6	364,913	5.0
WASHINGTON	10	549	3.0	21	100,065	1.4
NORTH CAROLINA	11	494	2.7	27	75,758	1.0
MASSACHUSETTS	12	443	2.5	17	121,390	1.7
CONNECTICUT	13	384	2.1	29	73,515	1.0
GEORGIA	14	376	2.1	9	253,131	3.5
TENNESSEE	15	371	2.1	28	74,954	1.0
FLORIDA	16	370	2.1	24	86,783	1.2
WISCONSIN	17	369	2.0	30	73,429	1.0
MISSOURI	18	355	2.0	19	112,592	1.5
LOUISIANA	19	350	1.9	10	239,401	3.3
KENTUCKY	20	328	1.8	14	190,550	2.6
MARYLAND	21	298	1.7	20	100,658	1.4
VIRGINIA	22	289	1.6	23	93,333	1.3
ALABAMA	23	263	1.5	13	209,200	2.9
MINNESOTA	24	258	1.4	5	424,611	5.8
KANSAS	25	207	1.1	16	137,709	1.9
ARKANSAS	26	196	1.1	12	216,953	3.0
OREGON	27	192	1.1	34	39,784	0.5
MISSISSIPPI	28	188	1.0	35	21,473	0.3
IOWA	29	176	1.0	25	84,693	1.2
ARIZONA	30	170	0.9	31	57,088	0.8
COLORADO	31	153	0.8	32	53,370	0.7
NEW HAMPSHIRE	32	142	0.8	41	7,656	0.1
OKLAHOMA	33	139	0.8	33	48,137	0.7
MAINE	34	137	0.8	44	5,104	0.1
WEST VIRGINIA	35	115	0.6	18	113,150	1.5
PUERTO RICO	36	104	0.6	22	97,587	1.3
RHODE ISLAND	36	104	0.6	39	9,747	0.1
UTAH	38	86	0.5	26	83,191	1.1
NEVADA	39	84	0.5	38	10,075	0.1
NEBRASKA	40	68	0.4	37	15,525	0.2
DELAWARE	41	63	0.3	36	16,779	0.2
VERMONT	41	63	0.3	43	5,181	0.1
ALASKA	43	48	0.3	45	4,609	0.1
MONTANA	44	46	0.3	40	8,924	0.1
IDAHO	45	45	0.2	46	2,845	0.0
NEW MEXICO	46	39	0.2	42	5,637	0.1
HAWAII	47	34	0.2	47	2,548	0.0
SOUTH DAKOTA	48	21	0.1	51	956	0.0
DISTRICT OF COLUMBIA	49	20	0.1	53	499	0.0
NORTH DAKOTA	50	15	0.1	49	1,553	0.0
WYOMING	51	14	0.1	50	1,227	0.0
GUAM	52	7	0.0	54	302	0.0
NAVAJO NATION	53	6	0.0	55	160	0.0
TRUST TERRITORIES	54	3	0.0	52	607	0.0
VIRGIN ISLANDS	55	2	0.0	48	2,059	0.0
SOUTH CAROLINA	56	0	0.0	56	0	0.0
CBI DATA	N/A	2	N/A	N/A	142	N/A
TOTAL		**18,029**	**100.0**		***7,332,532***	**100.0**

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.7 Fifty Largest RCRA Hazardous Waste Shippers in the U.S., 1997

RANK	EPA ID	NAME	CITY	TONS SHIPPED
1	MND006148092	GOPHER RESOURCE CORP	EAGAN, MN	340,701
2	TXD026481523	GALENA PARK TERMINAL	GALENA PARK, TX	196,845
3	GAD050766401	GA EPD/ESCAMBIA TREATING COMPANY	BRUNSWICK, GA	128,036
4	CAD008302903	CHEMICAL WASTE MANAGEMENT - AZUSA	AZUSA, CA	98,712
5	IND093219012	HERITAGE ENVIRONMENTAL SERVICES	INDIANAPOLIS, IN	94,288
6	MID980615298	PETROCHEM PROCESSING GRP. OF NORTRU, INC	DETROIT, MI	85,825
7	KSD980633259	SYSTECH ENVIRONMENTAL CORP	FREDONIA, KS	79,382
8	ARD981057870	RINECO	BENTON, AR	71,543
9	CA6170024289	NAVAL STATION SAN DIEGO	SAN DIEGO, CA	61,535
10	OHD005048947	SYSTECH ENVIRONMENTAL CORP	PAULDING, OH	61,061
11	MID054683479	CITY ENVIRONMENTAL INC.	DETROIT, MI	59,038
12	WVD116025180	CNG TRANSMISSION CORP. - HASTINGS	PINE GROVE, WV	57,373
13	TXD058265067	BAYPORT FACILITY - ARCO CHEMICAL CO	PASADENA, TX	54,815
14	TXD058275769	CHANNELVIEW COMPLEX	CHANNELVIEW, TX	53,851
15	IAD098027592	SAFETY KLEEN CORP - DAVENPORT	DAVENPORT, IA	53,100
16	MIR000027581	CADILLAC METAL CASTERS	CADILLAC, MI	52,777
17	ARD981908890	NUCOR YAMATO STEEL	BLYTHEVILLE, AR	50,322
18	ARD983278243	NUCOR STEEL ARKANSAS	BLYTHEVILLE, AR	49,868
19	ALD070513767	M & M CHEMICAL & EQUIPMENT COMPANY, INC.	ATTALLA, AL	47,832
20	PRD090399718	SAFETY KLEEN ENVIRONSYSTEMS CO.	MANATI, PR	47,546
21	KYD053348108	SAFETY-KLEEN CORP.	SMITHFIELD, KY	47,223
22	MA5000001040	MA HIGHWAY DEPT.-CAT PROJECT	BOSTON, MA	46,674
23	NYD002070118	SCHENECTADY INTERNATIONAL INC	ROTTERDAM JUNCTION, NY	45,536
24	TXD077603371	SAFETY-KLEEN CORP.	DENTON, TX	42,918
25	IND181157009	NUCOR STEEL	CRAWFORDSVILLE, IN	42,711
26	TXD987986734	CHEMICAL RESOURCE PROCESSING - INC.	DEER PARK, TX	36,480
27	MID981200835	SYSTECH ENV. CORP.--LAFARGE CORPORATION	ALPENA, MI	35,538
28	INR000001099	STEEL DYNAMICS INC	BUTLER, IN	34,754
29	OHD093945293	CWM RESOURCE RECOVERY INC	WEST CARROLLTON, OH	34,230
30	NJD002454544	MARISOL INC	MIDDLESEX, NJ	33,736
31	OHD004341509	CYTEC INDUSTRIES INC	MARIETTA, OH	33,503
32	CAD982471088	HY-TECH PLATING INC.	SAN CARLOS, CA	32,500
33	MID000820381	THE UPJOHN COMPANY	KALAMAZOO, MI	30,732
34	IND000646943	POLLUTION CONTROL INDUSTRIES, INC	EAST CHICAGO, IN	30,596
35	AZD009005422	RAYTHEON MISSILE SYSTEMS	TUCSON, AZ	29,486
36	KYD088438817	LWD INC	CALVERT CITY, KY	28,363
37	KYD985115237	GALLATIN STEEL COMPANY	WARSAW, KY	27,727
38	ILD980613913	SAFETY-KLEEN ENVIRONSYSTEMS CO	DOLTON, IL	26,768
39	MDR000004465	FIN-TEC INC	SALISBURY, MD	26,400
40	LAD000777201	CHEMICAL WASTE MANAGEMENT	SULPHUR, LA	26,359
41	CAD009452657	ROMIC ENVIRONMENTAL TECHNOLOGIES, INC.	EAST PALO ALTO, CA	25,599
42	OHD004228003	REPUBLIC ENG STEELS CANTON PLANT	CANTON, OH	25,432
43	ALD000622464	CHEMICAL WASTE MANAGEMENT, INC.	EMELLE, AL	25,216
44	TXD008079642	SABINE RIVER WORKS	ORANGE, TX	24,985
45	FLD000645481	FMC CORPORATION	JACKSONVILLE, FL	24,894
46	MID060975844	MICHIGAN RECOVERY SYSTEMS INC.	ROMULUS, MI	24,731
47	UTD981552177	LAIDLAW ENVIRONMENTAL SERVICES-ARAGONITE	ARAGONITE, UT	23,737
48	CAD008304594	K & L ANODIZING CORP.	BURBANK, CA	23,064
49	CAD066233966	QUEMETCO INC.	CITY OF INDUSTRY, CA	22,214
50	OHD980681571	NORTH EAST CHEMICAL CORP.	CLEVELAND, OH	21,224
TOTAL				**2,677,782**

Note: Column may not sum due to rounding.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

In 1997, 543 TSDs reported receiving 8 million tons of RCRA hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of TSDs receiving waste dropped by 101, and the quantity of waste received decreased by 1.3 million tons or 14%. Some of the decrease in the quantity of waste received may be attributable to the exclusion of wastewaters from the 1997 National Biennial Report data. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors.

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of this Report provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.4, 7.9 million tons of non-wastewater wastes were received by TSDs in 1995; therefore, a more accurate picture of the change in national hazardous waste receipts between 1995 and 1997 is an increase of 87 thousand tons or 1%.

Exhibits 3.8, 3.9, and 3.10 present the quantity of RCRA hazardous waste received and the number of receivers *in each EPA Region*. Region 5 reported the most receiving facilities (109), and these facilities also received the most waste (2.6 million tons, or 32% of the national receipt total). Region 1 reported receiving the least amount of waste (100 thousand tons), while Region 10 reported the fewest receivers (21).

Exhibit 3.8 Number and Percentage of Hazardous Waste Receivers and Total Quantity of RCRA Hazardous Waste Received, by EPA Region, 1997

	HAZARDOUS WASTE QUANTITY		RECEIVING FACILITIES	
EPA REGION	TONS RECEIVED	PERCENTAGE	NUMBER	PERCENTAGE
1	99,643	1.2	30	5.5
2	374,210	4.7	37	6.8
3	559,081	7.0	50	9.2
4	894,067	11.2	92	16.9
5	2,578,077	32.2	109	20.1
6	1,066,784	13.3	73	13.4
7	547,783	6.9	43	7.9
8	150,876	1.9	25	4.6
9	1,575,597	19.7	63	11.6
10	150,195	1.9	21	3.9
CBI DATA	0	N/A	0	N/A
TOTAL	**7,996,315**	**100.0**	**543**	**100.0**

Note: Columns may not sum due to rounding. Percentages do not include CBI data.

Exhibit 3.9 Number and Percentage of Hazardous Waste Receivers and Total Quantity of RCRA Hazardous Waste Received by Region, by the Total Quantity of Waste Received, 1997

	HAZARDOUS WASTE QUANTITY		RECEIVING FACILITIES	
EPA REGION	TONS RECEIVED	PERCENTAGE	NUMBER	PERCENTAGE
5	2,578,077	32.2	109	20.1
9	1,575,597	19.7	63	11.6
6	1,066,784	13.3	73	13.4
4	894,067	11.2	92	16.9
3	559,081	7.0	50	9.2
7	547,783	6.9	43	7.9
2	374,210	4.7	37	6.8
8	150,876	1.9	25	4.6
10	150,195	1.9	21	3.9
1	99,643	1.2	30	5.5
CBI DATA	0	N/A	0	N/A
TOTAL	**7,996,315**	**100.0**	**543**	**100.0**

Note: Columns may not sum due to rounding. Percentages do not include CBI data.

Exhibit 3.10 Number and Percentage of Hazardous Waste Receivers and Total Quantity of RCRA Hazardous Waste Received by Region, by the Number of Receiving Facilities, 1997

	RECEIVING FACILITIES		HAZARDOUS WASTE QUANTITY	
EPA REGION	NUMBER	PERCENTAGE	TONS RECEIVED	PERCENTAGE
5	109	20.1	2,578,077	32.2
4	92	16.9	894,067	11.2
6	73	13.4	1,066,784	13.3
9	63	11.6	1,575,597	19.7
3	50	9.2	559,081	7.0
7	43	7.9	547,783	6.9
2	37	6.8	374,210	4.7
1	30	5.5	99,643	1.2
8	25	4.6	150,876	1.9
10	21	3.9	150,195	1.9
CBI DATA	0	N/A	0	N/A
TOTAL	**543**	**100.0**	**7,996,315**	**100.0**

Note: Columns may not sum due to rounding. Percentages do not include CBI data.

Exhibits 3.11, 3.12, and 3.13 present the quantity of RCRA hazardous waste received (both from within and from outside of the State) and the number of receivers *in each State*. California reported the most receivers (50), followed by Texas (41), Pennsylvania (30), New York (26), Ohio (25), Florida (21), Indiana (21), Illinois (20), Michigan (20), and Missouri (20). Receivers in these States constituted 50% of the total number of receivers. California also reported receiving the largest quantity of waste (1.5 million tons), followed by Michigan (733 thousand tons), Ohio (693 thousand tons), Indiana (611 thousand tons), Texas (513 thousand tons), Pennsylvania (447 thousand tons), South Carolina (413 thousand tons), and Illinois (355 thousand tons). Receivers from these States accounted for 66% of the national waste receipt total. Eight (8) States reported they did not have any TSDs that received hazardous waste in 1997: the District of Columbia, Guam, Montana, the Navajo Nation, New Hampshire, the Trust Territories, the Virgin Islands, and Wyoming.

Exhibit 3.14 presents the 50 largest RCRA hazardous waste receivers in the United States for 1997. The TSDs on this list received 68% of all waste received in 1997.

As a cursory comparison of the shipment and receipt data reveals, the total quantity of waste reported shipped in 1997 is 664 thousand tons less than the total quantity received. The *Executive Summary* section entitled “RCRA Hazardous Waste Shipments and Receipts” provides an explanation for the discrepancies between the amount of waste reported shipped and the amount reported received.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.11 Quantity of RCRA Hazardous Waste Received and Number of Receivers, by State, 1997

STATE	HAZARDOUS WASTE QUANTITY			RECEIVING FACILITIES		
	RANK	TONS RECEIVED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	12	218,307	2.7	19	11	2.0
ALASKA	47	77	0.0	37	3	0.6
ARIZONA	38	9,476	0.1	27	8	1.5
ARKANSAS	14	200,603	2.5	30	6	1.1
CALIFORNIA	1	1,535,991	19.2	1	50	9.2
COLORADO	26	39,790	0.5	27	8	1.5
CONNECTICUT	37	14,890	0.2	22	10	1.8
DELAWARE	40	1,768	0.0	47	1	0.2
DISTRICT OF COLUMBIA	49	0	0.0	49	0	0.0
FLORIDA	36	22,640	0.3	6	21	3.9
GEORGIA	35	23,378	0.3	15	12	2.2
GUAM	49	0	0.0	49	0	0.0
HAWAII	44	525	0.0	41	2	0.4
IDAHO	19	82,019	1.0	37	3	0.6
ILLINOIS	8	355,053	4.4	8	20	3.7
INDIANA	4	611,458	7.6	6	21	3.9
IOWA	42	1,176	0.0	33	5	0.9
KANSAS	9	282,466	3.5	15	12	2.2
KENTUCKY	18	95,693	1.2	27	8	1.5
LOUISIANA	13	217,080	2.7	11	15	2.8
MAINE	45	344	0.0	41	2	0.4
MARYLAND	34	26,040	0.3	30	6	1.1
MASSACHUSETTS	23	52,293	0.7	15	12	2.2
MICHIGAN	2	732,643	9.2	8	20	3.7
MINNESOTA	15	156,239	2.0	15	12	2.2
MISSISSIPPI	28	34,889	0.4	37	3	0.6
MISSOURI	11	223,939	2.8	8	20	3.7
MONTANA	49	0	0.0	49	0	0.0
NAVAJO NATION	49	0	0.0	49	0	0.0
NEBRASKA	25	40,203	0.5	30	6	1.1
NEVADA	32	29,606	0.4	37	3	0.6
NEW HAMPSHIRE	49	0	0.0	49	0	0.0
NEW JERSEY	24	46,148	0.6	23	9	1.7
NEW MEXICO	48	2	0.0	41	2	0.4
NEW YORK	10	261,477	3.3	4	26	4.8
NORTH CAROLINA	33	26,357	0.3	11	15	2.8
NORTH DAKOTA	43	654	0.0	33	5	0.9
OHIO	3	693,041	8.7	5	25	4.6
OKLAHOMA	16	136,481	1.7	23	9	1.7
OREGON	29	31,338	0.4	41	2	0.4
PENNSYLVANIA	6	446,935	5.6	3	30	5.5
PUERTO RICO	21	66,584	0.8	41	2	0.4
RHODE ISLAND	30	30,868	0.4	41	2	0.4
SOUTH CAROLINA	7	413,322	5.2	23	9	1.7
SOUTH DAKOTA	46	255	0.0	47	1	0.2
TENNESSEE	22	59,481	0.7	13	13	2.4
TEXAS	5	512,619	6.4	2	41	7.6
TRUST TERRITORIES	49	0	0.0	49	0	0.0
UTAH	17	110,178	1.4	19	11	2.0
VERMONT	41	1,247	0.0	35	4	0.7
VIRGIN ISLANDS	49	0	0.0	49	0	0.0
VIRGINIA	20	80,722	1.0	23	9	1.7
WASHINGTON	27	36,760	0.5	13	13	2.4
WEST VIRGINIA	39	3,616	0.0	35	4	0.7
WISCONSIN	31	29,644	0.4	19	11	2.0
WYOMING	49	0	0.0	49	0	0.0
CBI DATA	N/A	0	N/A	N/A	0	N/A
TOTAL		**7,996,315**	**100.0**		**543**	**100.0**

Note: Columns may not sum due to rounding. Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.12 Rank Ordering of States Based on Quantity of RCRA Hazardous Waste Received and Number of Receivers, 1997

	HAZARDOUS WASTE QUANTITY			RECEIVING FACILITIES		
STATE	RANK	TONS RECEIVED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
CALIFORNIA	1	1,535,991	19.2	1	50	9.2
MICHIGAN	2	732,643	9.2	8	20	3.7
OHIO	3	693,041	8.7	5	25	4.6
INDIANA	4	611,458	7.6	6	21	3.9
TEXAS	5	512,619	6.4	2	41	7.6
PENNSYLVANIA	6	446,935	5.6	3	30	5.5
SOUTH CAROLINA	7	413,322	5.2	23	9	1.7
ILLINOIS	8	355,053	4.4	8	20	3.7
KANSAS	9	282,466	3.5	15	12	2.2
NEW YORK	10	261,477	3.3	4	26	4.8
MISSOURI	11	223,939	2.8	8	20	3.7
ALABAMA	12	218,307	2.7	19	11	2.0
LOUISIANA	13	217,080	2.7	11	15	2.8
ARKANSAS	14	200,603	2.5	30	6	1.1
MINNESOTA	15	156,239	2.0	15	12	2.2
OKLAHOMA	16	136,481	1.7	23	9	1.7
UTAH	17	110,178	1.4	19	11	2.0
KENTUCKY	18	95,693	1.2	27	8	1.5
IDAHO	19	82,019	1.0	37	3	0.6
VIRGINIA	20	80,722	1.0	23	9	1.7
PUERTO RICO	21	66,584	0.8	41	2	0.4
TENNESSEE	22	59,481	0.7	13	13	2.4
MASSACHUSETTS	23	52,293	0.7	15	12	2.2
NEW JERSEY	24	46,148	0.6	23	9	1.7
NEBRASKA	25	40,203	0.5	30	6	1.1
COLORADO	26	39,790	0.5	27	8	1.5
WASHINGTON	27	36,760	0.5	13	13	2.4
MISSISSIPPI	28	34,889	0.4	37	3	0.6
OREGON	29	31,338	0.4	41	2	0.4
RHODE ISLAND	30	30,868	0.4	41	2	0.4
WISCONSIN	31	29,644	0.4	19	11	2.0
NEVADA	32	29,606	0.4	37	3	0.6
NORTH CAROLINA	33	26,357	0.3	11	15	2.8
MARYLAND	34	26,040	0.3	30	6	1.1
GEORGIA	35	23,378	0.3	15	12	2.2
FLORIDA	36	22,640	0.3	6	21	3.9
CONNECTICUT	37	14,890	0.2	22	10	1.8
ARIZONA	38	9,476	0.1	27	8	1.5
WEST VIRGINIA	39	3,616	0.0	35	4	0.7
DELAWARE	40	1,768	0.0	47	1	0.2
VERMONT	41	1,247	0.0	35	4	0.7
IOWA	42	1,176	0.0	33	5	0.9
NORTH DAKOTA	43	654	0.0	33	5	0.9
HAWAII	44	525	0.0	41	2	0.4
MAINE	45	344	0.0	41	2	0.4
SOUTH DAKOTA	46	255	0.0	47	1	0.2
ALASKA	47	77	0.0	37	3	0.6
NEW MEXICO	48	2	0.0	41	2	0.4
DISTRICT OF COLUMBIA	49	0	0.0	49	0	0.0
GUAM	49	0	0.0	49	0	0.0
MONTANA	49	0	0.0	49	0	0.0
NAVAJO NATION	49	0	0.0	49	0	0.0
NEW HAMPSHIRE	49	0	0.0	49	0	0.0
TRUST TERRITORIES	49	0	0.0	49	0	0.0
VIRGIN ISLANDS	49	0	0.0	49	0	0.0
WYOMING	49	0	0.0	49	0	0.0
CBI DATA	N/A	0	N/A	N/A	0	N/A
TOTAL		**7,996,315**	**100.0**		**543**	**100.0**

Note: Columns may not sum due to rounding. Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.13 Rank Ordering of States Based on Number of Receiving Facilities and Quantity of RCRA Hazardous Waste Received, 1997

	RECEIVING FACILITIES			HAZARDOUS WASTE QUANTITY		
STATE	RANK	NUMBER	PERCENTAGE	RANK	TONS RECEIVED	PERCENTAGE
CALIFORNIA	1	50	9.2	1	1,535,991	19.2
TEXAS	2	41	7.6	5	512,619	6.4
PENNSYLVANIA	3	30	5.5	6	446,935	5.6
NEW YORK	4	26	4.8	10	261,477	3.3
OHIO	5	25	4.6	3	693,041	8.7
FLORIDA	6	21	3.9	36	22,640	0.3
INDIANA	6	21	3.9	4	611,458	7.6
ILLINOIS	8	20	3.7	8	355,053	4.4
MICHIGAN	8	20	3.7	2	732,643	9.2
MISSOURI	8	20	3.7	11	223,939	2.8
LOUISIANA	11	15	2.8	13	217,080	2.7
NORTH CAROLINA	11	15	2.8	33	26,357	0.3
TENNESSEE	13	13	2.4	22	59,481	0.7
WASHINGTON	13	13	2.4	27	36,760	0.5
GEORGIA	15	12	2.2	35	23,378	0.3
KANSAS	15	12	2.2	9	282,466	3.5
MASSACHUSETTS	15	12	2.2	23	52,293	0.7
MINNESOTA	15	12	2.2	15	156,239	2.0
ALABAMA	19	11	2.0	12	218,307	2.7
UTAH	19	11	2.0	17	110,178	1.4
WISCONSIN	19	11	2.0	31	29,644	0.4
CONNECTICUT	22	10	1.8	37	14,890	0.2
NEW JERSEY	23	9	1.7	24	46,148	0.6
OKLAHOMA	23	9	1.7	16	136,481	1.7
SOUTH CAROLINA	23	9	1.7	7	413,322	5.2
VIRGINIA	23	9	1.7	20	80,722	1.0
ARIZONA	27	8	1.5	38	9,476	0.1
COLORADO	27	8	1.5	26	39,790	0.5
KENTUCKY	27	8	1.5	18	95,693	1.2
ARKANSAS	30	6	1.1	14	200,603	2.5
MARYLAND	30	6	1.1	34	26,040	0.3
NEBRASKA	30	6	1.1	25	40,203	0.5
IOWA	33	5	0.9	42	1,176	0.0
NORTH DAKOTA	33	5	0.9	43	654	0.0
VERMONT	35	4	0.7	41	1,247	0.0
WEST VIRGINIA	35	4	0.7	39	3,616	0.0
ALASKA	37	3	0.6	47	77	0.0
IDAHO	37	3	0.6	19	82,019	1.0
MISSISSIPPI	37	3	0.6	28	34,889	0.4
NEVADA	37	3	0.6	32	29,606	0.4
HAWAII	41	2	0.4	44	525	0.0
MAINE	41	2	0.4	45	344	0.0
NEW MEXICO	41	2	0.4	48	2	0.0
OREGON	41	2	0.4	29	31,338	0.4
PUERTO RICO	41	2	0.4	21	66,584	0.8
RHODE ISLAND	41	2	0.4	30	30,868	0.4
DELAWARE	47	1	0.2	40	1,768	0.0
SOUTH DAKOTA	47	1	0.2	46	255	0.0
DISTRICT OF COLUMBIA	49	0	0.0	49	0	0.0
GUAM	49	0	0.0	49	0	0.0
MONTANA	49	0	0.0	49	0	0.0
NAVAJO NATION	49	0	0.0	49	0	0.0
NEW HAMPSHIRE	49	0	0.0	49	0	0.0
TRUST TERRITORIES	49	0	0.0	49	0	0.0
VIRGIN ISLANDS	49	0	0.0	49	0	0.0
WYOMING	49	0	0.0	49	0	0.0
CBI DATA	N/A	0	N/A	N/A	0	N/A
TOTAL		**543**	**100.0**		**7,996,315**	**100.0**

Note: Columns may not sum due to rounding. Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit 3.14 Fifty Largest RCRA Hazardous Waste Receivers in the U.S., 1997

RANK	EPA ID	NAME	CITY	TONS RECEIVED
1	CAD009452657	ROMIC ENVIRONMENTAL TECHNOLOGIES, INC.	EAST PALO ALTO, CA	1,143,838
2	OHD045243706	ENVIROSAFE SERVICES OF OHIO INC	OREGON, OH	213,385
3	MID000724831	MICHIGAN DISPOSAL WASTE TREATMENT PLANT	BELLEVILLE, MI	184,911
4	MID048090633	WAYNE DISPOSAL, INC.	BELLEVILLE, MI	162,563
5	TXD000719518	DISPOSAL SYSTEMS INC.	DEER PARK, TX	158,325
6	CAD066233966	QUEMETCO INC.	CITY OF INDUSTRY, CA	154,632
7	KSD007482029	VULCAN MATERIALS CO	WICHITA, KS	151,935
8	ILD000608471	CLEAN HARBORS SVCS INC	CHICAGO, IL	144,915
9	SCD070375985	LAIDLAW ENV SVS OF SC INC	PINEWOOD, SC	141,840
10	IND078911146	CHEMICAL WASTE MANAGEMENT OF INDIANA LLC	FORT WAYNE, IN	125,984
11	IND000199653	QUEMETCO	INDIANAPOLIS, IN	123,552
12	OKD065438376	LAIDLAW ENVIRONMENTAL SERVICES,INC LONE	WAYNOKA, OK	121,688
13	NYD030485288	REVERE SMELTING & REFINING CORPORATION	MIDDLETOWN, NY	120,954
14	OHD020273819	WASTE MANAGEMENT OF OHIO INC	VICKERY, OH	120,221
15	MND006148092	GOPHER RESOURCE CORP	EAGAN, MN	112,513
16	PAD002395887	HORSEHEAD RESOURCE DVLPT PALMERTON	PALMERTON, PA	109,106
17	SCD003351699	GIANT CEMENT COMPANY	HARLEYVILLE, SC	105,229
18	MID980615298	PETROCHEM PROCESSING GRP. OF NORTRU, INC	DETROIT, MI	98,847
19	NYD049836679	CWM CHEMICAL SERVICES, L.L.C.	MODEL CITY, NY	98,821
20	IND005081542	ESSROC CEMENT CORP	LOGANSPORT, IN	87,433
21	IDD073114654	ENVIROSAFE SERVICES OF IDAHO, INC SITE B	GRAND VIEW, ID	81,713
22	ALD000622464	CHEMICAL WASTE MANAGEMENT, INC.	EMELLE, AL	81,269
23	IND980503890	HERITAGE ENVIRONMENTAL SVC INC	ROACHDALE, IN	80,558
24	LAD000777201	CHEMICAL WASTE MANAGEMENT	SULPHUR, LA	79,931
25	MOD029729688	HOLNAM INC/SAFETY KLEEN INC	CLARKSVILLE, MO	79,171
26	CAT000646117	CHEMICAL WASTE MANAGEMENT, INC.	KETTLEMAN CITY, CA	78,722
27	ILD000805812	PEORIA DISPOSAL CO INC	PEORIA, IL	76,165
28	MOD054018288	CONTINENTAL CEMENT CO	HANNIBAL, MO	75,918
29	TXD055141378	SAFETY-KLEEN (DEER PARK), INC.	DEER PARK, TX	60,981
30	ARD981057870	RINECO	BENTON, AR	59,383
31	IND006419212	LONE STAR INDUSTRIES INC	GREENCASTLE, IN	57,271
32	MID054683479	CITY ENVIRONMENTAL INC.	DETROIT, MI	56,939
33	OHD987048733	LAFARGE CORPORATION	PAULDING, OH	56,247
34	SCD003368891	SAFETY KLEEN SYSTEMS INC HOLLY HILL	HOLLY HILL, SC	56,079
35	KSD980633259	SYSTECH ENVIRONMENTAL CORP	FREDONIA, KS	55,196
36	PAD002389559	KEYSTONE CEMENT CO	BATH, PA	54,614
37	OHD005048947	SYSTECH ENVIRONMENTAL CORP	PAULDING, OH	53,557
38	ILD980613913	SAFETY-KLEEN ENVIRONSYSTEMS CO	DOLTON, IL	53,112
39	UTD991301748	LAIDLAW ENV. SERVICES (LONE & GRASSY MTN	CLIVE, UT	52,840
40	ARD981512270	ASH GROVE CEMENT COMPANY FOREMAN PLANT	FOREMAN, AR	52,556
41	PAD004835146	MILL SERVICE INC YUKON	YUKON, PA	48,284
42	ALD070513767	M & M CHEMICAL & EQUIPMENT COMPANY, INC.	ATTALLA, AL	48,195
43	MID074259565	DYNECOL INCORPORATED	DETROIT, MI	48,186
44	OHD980613541	VON ROLL AMERICA, INC.	EAST LIVERPOOL, OH	47,718
45	ARD006354161	REYNOLDS METALS CO GUM SPRINGS PLANT	ARKADELPHIA, AR	46,139
46	LAD000778514	LAIDLAW ENVIRONMENTAL SVCS PLAQUEMINES	PLAQUEMINE, LA	45,160
47	TXD077603371	SAFETY-KLEEN CORP.	DENTON, TX	44,910
48	LAD008086506	PPG INDUSTRIES INC	WESTLAKE, LA	43,883
49	NJD002454544	MARISOL INC	MIDDLESEX, NJ	43,357
50	ARD069748192	ENSCO INC	EL DORADO, AR	40,896
TOTAL				**5,439,641**

Note: Column may not sum due to rounding.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

4.0 IMPORTS AND EXPORTS

The following section provides an overview of the 1997 RCRA hazardous waste imports and exports data through exhibits and textual summaries. Only those quantities of waste that enter or leave the State are included in this category. For a complete description of this section's contents, please refer to the *Executive Summary* sections entitled "RCRA Hazardous Waste" and "RCRA Hazardous Waste Shipments and Receipts."

Of the 8 million tons of RCRA hazardous waste received in 1997, 4 million tons of waste were imported from other States. This is a 1.9 million ton or 32% decrease when compared to the 1995 National Biennial Report. Of the 7.3 million tons of RCRA hazardous waste shipped in 1997, 4.4 million tons of waste were exported to other States. This reflects a 924 thousand ton or 17% decline in exports when compared to the 1995 National Biennial Report. Some of the decrease in the quantity of waste imported or exported may be attributable to the exclusion of wastewaters from the 1997 National Biennial Report data. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease is more likely the result of other factors. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to the 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report."

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of this Report provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.5, 5.1 million tons of non-wastewater wastes were imported from other States in 1995; therefore, a more accurate picture of the change in national hazardous waste imports between 1995 and 1997 is a decrease of 1.1 million tons or 22%. Likewise, as presented in Exhibit B.5, 3.6 million tons of non-wastewater wastes were exported to other States in 1995; therefore, a more accurate picture of the change in national hazardous waste exports between 1995 and 1997 is an increase of 753 thousand tons or 17%.

Exhibit 4.1 presents the quantity of RCRA hazardous waste imported and exported *by each EPA Region*[1]. Receivers in Region 5 reported importing the largest quantity of waste (1.3 million tons), and shippers in the Region also exported the most waste (1.3 million tons). Receivers in Region 1 reported receiving the least amount of waste from out-of-State (54 thousand tons), while shippers in Region 8 reported exporting the least (86 thousand tons).

Exhibit 4.1 RCRA Hazardous Waste Imports and Exports, by EPA Region, 1997

EPA REGION	IMPORTS (TONS)	EXPORTS (TONS)
1	53,795	189,339
2	127,506	332,839
3	367,435	465,576
4	638,755	777,991
5	1,334,186	1,295,826
6	591,267	645,303
7	351,473	217,669
8	91,855	85,580
9	302,672	268,549
10	121,828	114,787
CBI DATA	0	201
TOTAL	**3,980,773**	**4,393,660**

Note: Columns may not sum due to rounding.

Exhibit 4.2 presents the quantity of RCRA hazardous waste imported and exported *by each State*. The five (5) States whose TSDs reported importing the most hazardous waste were Ohio (428 thousand tons), Michigan (394 thousand tons), South Carolina (316 thousand tons), Pennsylvania (309 thousand tons), California (270 thousand tons), Indiana (235 thousand tons), and Missouri (195 thousand tons). The TSDs in these States imported 54% of the national total of waste imports. Eleven (11) States reported they did not have any TSDs that imported waste in 1997: Alaska, the District of Columbia, Guam, Maine, Montana, the Navajo Nation, New Hampshire, New Mexico, the Trust Territories, the Virgin Islands, and Wyoming.

[1] Appendix A includes a list of States by EPA Region.

Exhibit 4.2 RCRA Hazardous Waste Imports and Exports, by State, 1997

STATE	IMPORTS (TONS)	EXPORTS (TONS)
ALABAMA	143,757	150,611
ALASKA	0	4,531
ARIZONA	3,913	51,869
ARKANSAS	184,823	202,661
CALIFORNIA	270,167	207,119
COLORADO	35,705	41,257
CONNECTICUT	9,081	63,991
DELAWARE	1,612	16,537
DISTRICT OF COLUMBIA	0	499
FLORIDA	7,126	80,786
GEORGIA	17,983	249,910
GUAM	0	14
HAWAII	23	2,210
IDAHO	81,100	2,147
ILLINOIS	150,922	205,851
INDIANA	234,737	115,041
IOWA	218	84,257
KANSAS	117,719	36,336
KENTUCKY	59,856	155,525
LOUISIANA	146,521	173,756
MAINE	0	4,827
MARYLAND	20,406	98,480
MASSACHUSETTS	18,659	98,692
MICHIGAN	394,406	189,391
MINNESOTA	105,301	412,068
MISSISSIPPI	34,469	15,213
MISSOURI	195,274	81,793
MONTANA	0	8,924
NAVAJO NATION	0	160
NEBRASKA	38,261	15,283
NEVADA	28,570	6,570
NEW HAMPSHIRE	0	7,656
NEW JERSEY	21,031	110,327
NEW MEXICO	0	5,554
NEW YORK	106,438	180,651
NORTH CAROLINA	12,925	60,867
NORTH DAKOTA	264	1,547
OHIO	428,011	312,603
OKLAHOMA	126,313	35,013
OREGON	24,890	28,885
PENNSYLVANIA	309,031	190,543
PUERTO RICO	38	39,802
RHODE ISLAND	25,239	9,091
SOUTH CAROLINA	315,690	0
SOUTH DAKOTA	96	954
TENNESSEE	46,949	65,079
TEXAS	133,609	228,318
TRUST TERRITORIES	0	607
UTAH	55,789	31,671
VERMONT	815	5,082
VIRGIN ISLANDS	0	2,059
VIRGINIA	32,840	46,533
WASHINGTON	15,838	79,224
WEST VIRGINIA	3,546	112,984
WISCONSIN	20,809	60,871
WYOMING	0	1,227
CBI DATA	0	201
TOTAL	**3,980,773**	**4,393,660**

Note: Columns may not sum due to rounding.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

The five (5) States whose shippers reported exporting the most hazardous waste were Minnesota (412 thousand tons), Ohio (313 thousand tons), Georgia (250 thousand tons), Texas (228 thousand tons), California (207 thousand tons), Illinois (206 thousand tons), Arkansas (203 thousand tons), Pennsylvania (191 thousand tons), and Michigan (189 thousand tons). The exports from these five (5) States accounted for 50% of the national total of hazardous waste exports. South Carolina reported they did not have any shippers that exported waste in 1997.

As a cursory comparison of the import and export data reveals, the total quantity of waste reported imported in 1997 is 413 thousand tons less than the total quantity exported. The *Executive Summary* section entitled "RCRA Hazardous Waste Shipments and Receipts" provides an explanation for the discrepancies between the amount of waste reported shipped and the amount reported received.

APPENDIX A

EPA REGION - STATE MAPPING

This page intentionally left blank.

EPA REGION - STATE MAPPING

EPA REGION	STATES IN REGION
REGION 1	Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont
REGION 2	New Jersey New York Puerto Rico Virgin Islands
REGION 3	Delaware District of Columbia Maryland Pennsylvania Virginia West Virginia
REGION 4	Alabama Florida Georgia Kentucky Mississippi North Carolina South Carolina Tennessee
REGION 5	Illinois Indiana Michigan Minnesota Ohio Wisconsin
REGION 6	Arkansas Louisiana New Mexico Oklahoma Texas
REGION 7	Iowa Kansas Missouri Nebraska
REGION 8	Colorado Montana North Dakota South Dakota Utah Wyoming
REGION 9	Arizona California Guam Hawaii Navajo Nation Nevada Trust Territories
REGION 10	Alaska Idaho Oregon Washington

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

This page intentionally left blank.

APPENDIX B

1995 NATIONAL BIENNIAL REPORT DATA USING 1997 NATIONAL REPORTING LOGIC

This page intentionally left blank.

Appendix B provides the 1995 National Biennial Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Report). Because the wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading, EPA is providing the 1995 BRS data in this format to facilitate an accurate comparison of the changes in generation, management, shipping, receiving, and imports and exports between the 1995 and 1997 biennial reporting cycles. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report."

Exhibit B.1 Quantity of RCRA Hazardous Waste Generated and Number of Hazardous Waste Generators, by State, 1995

STATE	HAZARDOUS WASTE QUANTITY			LARGE QUANTITY GENERATORS		
	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	18	323,063	0.9	24	279	1.3
ALASKA	49	2,955	0.0	43	64	0.3
ARIZONA	36	42,309	0.1	29	199	1.0
ARKANSAS	7	964,747	2.7	28	204	1.0
CALIFORNIA	11	775,685	2.1	2	1,640	7.9
COLORADO	27	106,705	0.3	32	156	0.7
CONNECTICUT	29	77,164	0.2	18	395	1.9
DELAWARE	38	21,649	0.1	43	64	0.3
DISTRICT OF COLUMBIA	54	660	0.0	49	18	0.1
FLORIDA	19	292,225	0.8	17	418	2.0
GEORGIA	22	173,624	0.5	16	430	2.1
GUAM	55	285	0.0	53	13	0.1
HAWAII	50	2,923	0.0	45	53	0.3
IDAHO	13	509,688	1.4	46	52	0.2
ILLINOIS	2	2,732,116	7.5	6	1,156	5.5
INDIANA	8	915,035	2.5	10	609	2.9
IOWA	31	71,600	0.2	30	170	0.8
KANSAS	5	1,635,191	4.5	27	210	1.0
KENTUCKY	20	206,651	0.6	15	440	2.1
LOUISIANA	3	1,922,290	5.3	21	359	1.7
MAINE	46	5,370	0.0	34	144	0.7
MARYLAND	32	61,768	0.2	25	221	1.1
MASSACHUSETTS	17	330,987	0.9	13	476	2.3
MICHIGAN	12	725,545	2.0	9	718	3.4
MINNESOTA	21	200,238	0.6	23	284	1.4
MISSISSIPPI	6	1,540,036	4.2	33	152	0.7
MISSOURI	25	107,768	0.3	22	354	1.7
MONTANA	42	9,603	0.0	46	52	0.2
NAVAJO NATION	56	169	0.0	54	11	0.1
NEBRASKA	39	17,199	0.0	40	86	0.4
NEVADA	45	6,148	0.0	41	80	0.4
NEW HAMPSHIRE	40	15,776	0.0	35	130	0.6
NEW JERSEY	16	402,904	1.1	5	1,178	5.6
NEW MEXICO	44	7,377	0.0	48	44	0.2
NEW YORK	14	449,865	1.2	1	2,144	10.3
NORTH CAROLINA	28	82,448	0.2	11	587	2.8
NORTH DAKOTA	48	3,639	0.0	52	16	0.1
OHIO	4	1,643,419	4.5	3	1,373	6.6
OKLAHOMA	35	46,355	0.1	31	168	0.8
OREGON	34	58,053	0.2	26	220	1.1
PENNSYLVANIA	9	817,584	2.3	7	1,134	5.4
PUERTO RICO	33	58,209	0.2	39	88	0.4
RHODE ISLAND	43	8,681	0.0	37	112	0.5
SOUTH CAROLINA	37	23,708	0.1	19	371	1.8
SOUTH DAKOTA	53	1,068	0.0	50	17	0.1
TENNESSEE	10	788,775	2.2	14	467	2.2
TEXAS	1	17,207,101	47.4	4	1,329	6.4
TRUST TERRITORIES	47	4,701	0.0	55	3	0.0
UTAH	30	76,071	0.2	38	101	0.5
VERMONT	41	9,805	0.0	42	66	0.3
VIRGIN ISLANDS	51	2,219	0.0	56	1	0.0
VIRGINIA	26	107,157	0.3	19	371	1.8
WASHINGTON	23	136,383	0.4	8	748	3.6
WEST VIRGINIA	24	117,539	0.3	36	117	0.6
WISCONSIN	15	428,030	1.2	12	558	2.7
WYOMING	52	2,009	0.0	50	17	0.1
TOTAL		**36,280,274**	**100.0**		**20,867**	**100.0**

Note: Columns may not sum due to rounding.
This exhibit presents the 1995 National Biennial Report data using the 1997 National Reporting logic.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit B.2 Quantity of RCRA Hazardous Waste Managed and Number of RCRA TSD Facilities, by State, 1995

	HAZARDOUS WASTE QUANTITY [1]			TSD FACILITIES		
STATE	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	16	307,433	0.9	18	42	2.1
ALASKA	51	0	0.0	43	9	0.5
ARIZONA	42	2,409	0.0	28	26	1.3
ARKANSAS	9	965,281	2.7	36	17	0.9
CALIFORNIA	12	468,002	1.3	2	136	6.9
COLORADO	24	102,522	0.3	20	36	1.8
CONNECTICUT	32	26,415	0.1	17	43	2.2
DELAWARE	41	2,790	0.0	48	5	0.3
DISTRICT OF COLUMBIA	51	0	0.0	53	1	0.1
FLORIDA	23	123,813	0.4	11	56	2.8
GEORGIA	28	78,882	0.2	13	51	2.6
GUAM	51	0	0.0	51	2	0.1
HAWAII	45	476	0.0	47	6	0.3
IDAHO	11	539,567	1.5	41	10	0.5
ILLINOIS	13	375,854	1.1	4	107	5.4
INDIANA	8	1,083,091	3.1	5	76	3.8
IOWA	37	7,184	0.0	27	28	1.4
KANSAS	3	1,737,653	4.9	14	50	2.5
KENTUCKY	22	129,837	0.4	19	40	2.0
LOUISIANA	2	3,030,843	8.6	15	49	2.5
MAINE	46	361	0.0	35	18	0.9
MARYLAND	38	4,264	0.0	31	22	1.1
MASSACHUSETTS	36	7,666	0.0	21	34	1.7
MICHIGAN	6	1,380,025	3.9	3	112	5.7
MINNESOTA	18	190,225	0.5	25	29	1.5
MISSISSIPPI	5	1,521,353	4.3	34	19	1.0
MISSOURI	17	232,363	0.7	10	68	3.4
MONTANA	39	4,053	0.0	43	9	0.5
NAVAJO NATION	51	0	0.0	56	0	0.0
NEBRASKA	31	33,499	0.1	38	14	0.7
NEVADA	25	95,662	0.3	37	15	0.8
NEW HAMPSHIRE	51	0	0.0	53	1	0.1
NEW JERSEY	7	1,173,120	3.3	11	56	2.8
NEW MEXICO	48	6	0.0	38	14	0.7
NEW YORK	14	322,631	0.9	7	70	3.5
NORTH CAROLINA	33	22,132	0.1	8	69	3.5
NORTH DAKOTA	44	1,862	0.0	45	7	0.4
OHIO	4	1,619,381	4.6	6	74	3.7
OKLAHOMA	20	137,553	0.4	22	31	1.6
OREGON	21	131,843	0.4	40	11	0.6
PENNSYLVANIA	10	803,496	2.3	8	69	3.5
PUERTO RICO	30	40,384	0.1	33	20	1.0
RHODE ISLAND	35	16,123	0.0	41	10	0.5
SOUTH CAROLINA	19	180,290	0.5	28	26	1.3
SOUTH DAKOTA	49	1	0.0	50	3	0.2
TENNESSEE	15	307,779	0.9	25	29	1.5
TEXAS	1	17,670,162	50.3	1	192	9.7
TRUST TERRITORIES	40	2,980	0.0	51	2	0.1
UTAH	26	95,258	0.3	32	21	1.1
VERMONT	50	0	0.0	45	7	0.4
VIRGIN ISLANDS	47	20	0.0	53	1	0.1
VIRGINIA	29	55,687	0.2	22	31	1.6
WASHINGTON	34	20,972	0.1	16	47	2.4
WEST VIRGINIA	27	79,559	0.2	28	26	1.3
WISCONSIN	43	1,879	0.0	24	30	1.5
WYOMING	51	0	0.0	48	5	0.3
TOTAL		**35,134,641**	**100.0**		**1,982**	**100.0**

[1]Quantity managed only by storage is excluded.

Note: Columns may not sum due to rounding.
This exhibit presents the 1995 National Biennial Report data using the 1997 National Reporting logic.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit B.3 Quantity of RCRA Hazardous Waste Shipped and Number of Hazardous Waste Shippers, by State, 1995

	HAZARDOUS WASTE QUANTITY			SHIPPERS		
STATE	RANK	TONS SHIPPED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	11	195,830	3.1	23	266	1.4
ALASKA	46	3,535	0.1	43	59	0.3
ARIZONA	34	38,538	0.6	28	188	1.0
ARKANSAS	10	217,492	3.5	27	200	1.0
CALIFORNIA	4	378,366	6.1	2	1,564	8.2
COLORADO	29	56,096	0.9	31	147	0.8
CONNECTICUT	21	77,156	1.2	18	375	2.0
DELAWARE	36	18,406	0.3	42	61	0.3
DISTRICT OF COLUMBIA	54	661	0.0	48	18	0.1
FLORIDA	23	67,142	1.1	14	417	2.2
GEORGIA	17	106,183	1.7	17	376	2.0
GUAM	53	669	0.0	52	12	0.1
HAWAII	45	3,580	0.1	45	48	0.3
IDAHO	47	2,890	0.0	46	42	0.2
ILLINOIS	6	304,240	4.9	6	1,092	5.7
INDIANA	7	293,234	4.7	10	583	3.1
IOWA	31	49,065	0.8	29	166	0.9
KANSAS	13	189,799	3.0	25	202	1.1
KENTUCKY	12	194,671	3.1	15	408	2.1
LOUISIANA	9	239,062	3.8	19	343	1.8
MAINE	44	5,071	0.1	33	143	0.7
MARYLAND	26	64,186	1.0	24	210	1.1
MASSACHUSETTS	18	104,273	1.7	13	450	2.4
MICHIGAN	3	409,868	6.6	9	669	3.5
MINNESOTA	25	64,911	1.0	22	273	1.4
MISSISSIPPI	35	21,282	0.3	32	144	0.8
MISSOURI	16	129,778	2.1	20	341	1.8
MONTANA	43	6,801	0.1	44	49	0.3
NAVAJO NATION	55	161	0.0	53	9	0.0
NEBRASKA	37	16,517	0.3	39	80	0.4
NEVADA	42	6,900	0.1	40	72	0.4
NEW HAMPSHIRE	40	10,286	0.2	34	121	0.6
NEW JERSEY	8	240,868	3.9	5	1,095	5.7
NEW MEXICO	41	7,291	0.1	46	42	0.2
NEW YORK	14	173,861	2.8	1	1,897	9.9
NORTH CAROLINA	19	85,001	1.4	11	564	3.0
NORTH DAKOTA	48	2,226	0.0	49	16	0.1
OHIO	2	507,242	8.1	3	1,268	6.6
OKLAHOMA	30	49,646	0.8	30	155	0.8
OREGON	33	41,739	0.7	25	202	1.1
PENNSYLVANIA	5	308,724	4.9	7	1,091	5.7
PUERTO RICO	24	66,391	1.1	38	86	0.5
RHODE ISLAND	38	11,181	0.2	37	96	0.5
SOUTH CAROLINA	56	0	0.0	56	0	0.0
SOUTH DAKOTA	52	1,063	0.0	49	16	0.1
TENNESSEE	22	71,836	1.2	16	383	2.0
TEXAS	1	971,669	15.6	4	1,259	6.6
TRUST TERRITORIES	51	1,461	0.0	54	3	0.0
UTAH	27	61,010	1.0	36	97	0.5
VERMONT	39	10,496	0.2	41	64	0.3
VIRGIN ISLANDS	49	2,131	0.0	55	1	0.0
VIRGINIA	20	84,940	1.4	21	310	1.6
WASHINGTON	15	163,253	2.6	8	672	3.5
WEST VIRGINIA	32	44,974	0.7	35	111	0.6
WISCONSIN	28	58,855	0.9	12	515	2.7
WYOMING	50	1,471	0.0	51	15	0.1
TOTAL		**6,243,980**	**100.0**		**19,086**	**100.0**

Note: Columns may not sum due to rounding.
This exhibit presents the 1995 National Biennial Report data using the 1997 National Reporting logic.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit B.4 Quantity of RCRA Hazardous Waste Received and Number of Receivers, by State, 1995

STATE	HAZARDOUS WASTE QUANTITY			RECEIVING FACILITIES		
	RANK	TONS RECEIVED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	15	185,078	2.3	16	13	2.2
ALASKA	49	268	0.0	39	3	0.5
ARIZONA	35	14,879	0.2	27	8	1.3
ARKANSAS	13	213,916	2.7	24	10	1.7
CALIFORNIA	8	319,188	4.0	2	38	6.4
COLORADO	26	43,399	0.5	27	8	1.3
CONNECTICUT	29	33,907	0.4	19	12	2.0
DELAWARE	41	1,423	0.0	47	1	0.2
DISTRICT OF COLUMBIA	51	0	0.0	51	0	0.0
FLORIDA	23	46,586	0.6	6	24	4.0
GEORGIA	33	18,734	0.2	14	14	2.3
GUAM	48	312	0.0	47	1	0.2
HAWAII	42	1,080	0.0	44	2	0.3
IDAHO	30	32,750	0.4	44	2	0.3
ILLINOIS	12	217,328	2.7	7	23	3.9
INDIANA	5	502,050	6.3	8	22	3.7
IOWA	40	1,527	0.0	35	5	0.8
KANSAS	10	247,600	3.1	21	11	1.8
KENTUCKY	18	128,903	1.6	14	14	2.3
LOUISIANA	7	324,275	4.1	12	17	2.8
MAINE	45	562	0.0	47	1	0.2
MARYLAND	28	35,562	0.4	31	7	1.2
MASSACHUSETTS	24	46,066	0.6	16	13	2.2
MICHIGAN	2	1,076,175	13.6	11	18	3.0
MINNESOTA	19	100,533	1.3	9	19	3.2
MISSISSIPPI	36	12,799	0.2	39	3	0.5
MISSOURI	11	228,562	2.9	13	16	2.7
MONTANA	46	553	0.0	39	3	0.5
NAVAJO NATION	51	0	0.0	51	0	0.0
NEBRASKA	31	32,400	0.4	33	6	1.0
NEVADA	20	95,982	1.2	37	4	0.7
NEW HAMPSHIRE	51	0	0.0	51	0	0.0
NEW JERSEY	1	1,090,521	13.8	21	11	1.8
NEW MEXICO	47	454	0.0	39	3	0.5
NEW YORK	14	191,829	2.4	3	29	4.9
NORTH CAROLINA	25	43,716	0.6	9	19	3.2
NORTH DAKOTA	44	800	0.0	35	5	0.8
OHIO	4	577,617	7.3	4	28	4.7
OKLAHOMA	16	133,388	1.7	24	10	1.7
OREGON	17	130,638	1.7	47	1	0.2
PENNSYLVANIA	6	431,013	5.4	4	28	4.7
PUERTO RICO	27	37,902	0.5	39	3	0.5
RHODE ISLAND	34	18,461	0.2	37	4	0.7
SOUTH CAROLINA	9	262,097	3.3	27	8	1.3
SOUTH DAKOTA	50	260	0.0	44	2	0.3
TENNESSEE	32	26,949	0.3	21	11	1.8
TEXAS	3	828,577	10.5	1	61	10.2
TRUST TERRITORIES	51	0	0.0	51	0	0.0
UTAH	21	79,259	1.0	24	10	1.7
VERMONT	43	999	0.0	33	6	1.0
VIRGIN ISLANDS	51	0	0.0	51	0	0.0
VIRGINIA	22	72,628	0.9	19	12	2.0
WASHINGTON	37	12,520	0.2	16	13	2.2
WEST VIRGINIA	38	3,555	0.0	31	7	1.2
WISCONSIN	39	3,303	0.0	27	8	1.3
WYOMING	51	0	0.0	51	0	0.0
TOTAL		**7,908,885**	**100.0**		**597**	**100.0**

Note: Columns may not sum due to rounding.
This exhibit presents the 1995 National Biennial Report data using the 1997 National Reporting logic.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Exhibit B.5 RCRA Hazardous Waste Imports and Exports, by State, 1995

STATE	IMPORTS (TONS)	EXPORTS (TONS)
ALABAMA	118,829	118,101
ALASKA	0	3,398
ARIZONA	10,095	33,510
ARKANSAS	204,798	208,449
CALIFORNIA	20,771	189,514
COLORADO	38,795	50,374
CONNECTICUT	21,310	69,857
DELAWARE	1,221	18,014
DISTRICT OF COLUMBIA	0	661
FLORIDA	16,753	53,279
GEORGIA	13,270	94,625
GUAM	0	386
HAWAII	28	2,927
IDAHO	32,011	2,105
ILLINOIS	122,449	212,633
INDIANA	220,011	118,845
IOWA	221	48,806
KANSAS	89,030	29,500
KENTUCKY	96,094	162,922
LOUISIANA	226,171	144,769
MAINE	0	4,686
MARYLAND	29,990	62,359
MASSACHUSETTS	21,183	81,302
MICHIGAN	801,847	195,338
MINNESOTA	17,148	41,791
MISSISSIPPI	12,136	21,065
MISSOURI	191,748	74,694
MONTANA	432	6,801
NAVAJO NATION	0	161
NEBRASKA	31,290	16,377
NEVADA	94,688	5,971
NEW HAMPSHIRE	0	10,286
NEW JERSEY	1,061,126	178,440
NEW MEXICO	55	7,250
NEW YORK	98,735	137,504
NORTH CAROLINA	21,937	65,041
NORTH DAKOTA	361	2,175
OHIO	365,908	304,854
OKLAHOMA	120,083	39,287
OREGON	112,896	22,958
PENNSYLVANIA	288,452	155,763
PUERTO RICO	47	39,046
RHODE ISLAND	12,664	10,756
SOUTH CAROLINA	191,822	0
SOUTH DAKOTA	101	1,061
TENNESSEE	17,698	50,469
TEXAS	273,767	226,577
TRUST TERRITORIES	0	1,461
UTAH	50,515	26,153
VERMONT	585	10,368
VIRGIN ISLANDS	0	2,131
VIRGINIA	32,264	46,684
WASHINGTON	8,428	140,379
WEST VIRGINIA	2,745	44,795
WISCONSIN	194	42,397
WYOMING	0	1,471
TOTAL	**5,092,702**	**3,640,531**

Note: Columns may not sum due to rounding.

This exhibit presents the 1995 National Biennial Report data using the 1997 National Reporting logic.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

APPENDIX C

1997 HAZARDOUS WASTE REPORT
SYSTEM TYPE CODES

This page intentionally left blank.

EPA HAZARDOUS WASTE CODES

Code	System Type
	METALS RECOVERY (FOR REUSE)
M011	High temperature metals recovery
M012	Retorting
M013	Secondary smelting
M014	Other metals recovery for reuse: e.g., ion exchange, reverse osmosis, acid leaching, etc. (Specify in Comments)
M019	Metals recovery - type unknown
	SOLVENTS RECOVERY
M021	Fractionation/distillation
M022	Thin film evaporation
M023	Solvent extraction
M024	Other solvent recovery (Specify in Comments)
M029	Solvents recovery - type unknown
	OTHER RECOVERY
M031	Acid regeneration
M032	Other recovery: e.g., waste oil recovery, nonsolvent organics recovery, etc. (Specify in Comments)
M039	Other recovery - type unknown
	INCINERATION
M041	Incineration - liquids
M042	Incineration - sludges
M043	Incineration - solids
M044	Incineration - gases
M049	Incineration - type unknown
	ENERGY RECOVERY (REUSE AS FUEL)
M051	Energy recovery - liquids
M052	Energy recovery - sludges
M053	Energy recovery - solids
M059	Energy recovery - type unknown
	FUEL BLENDING
M061	Fuel blending
	AQUEOUS INORGANIC TREATMENT
M071	Chrome reduction followed by chemical precipitation
M072	Cyanide destruction followed by chemical precipitation
M073	Cyanide destruction only
M074	Chemical oxidation followed by chemical precipitation
M075	Chemical oxidation only
M076	Wet air oxidation
M077	Chemical precipitation
M078	Other aqueous inorganic treatment: e.g., ion exchange, reverse osmosis, etc. (Specify in Comments)
M079	Aqueous inorganic treatment - type unknown
	AQUEOUS ORGANIC TREATMENT
M081	Biological treatment
M082	Carbon adsorption
M083	Air/steam stripping
M084	Wet air oxidation
M085	Other aqueous organic treatment (Specify in Comments)
M089	Aqueous organic treatment - type unknown
	AQUEOUS ORGANIC AND INORGANIC TREATMENT
M091	Chemical precipitation in combination with biological treatment
M092	Chemical precipitation in combination with carbon adsorption
M093	Wet air oxidation
M094	Other organic/inorganic treatment (Specify in Comments)
M099	Aqueous organic and inorganic treatment - type unknown
	SLUDGE TREATMENT
M101	Sludge dewatering
M102	Addition of excess lime
M103	Absorption/adsorption
M104	Solvent extraction
M109	Sludge treatment - type unknown

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	System Type
	STABILIZATION
M111	Stabilization/Chemical fixation using cementitious and/or pozzolanic materials
M112	Other stabilization (Specify in Comments)
M119	Stabilization - type unknown
	OTHER TREATMENT
M121	Neutralization only
M122	Evaporation only
M123	Settling/clarification only
M124	Phase separation (e.g., emulsion breaking, filtration) only
M125	Other treatment (Specify in Comments)
M129	Other treatment - type unknown

Code	System Type
	DISPOSAL
M131	Land treatment/application/farming
M132	Landfill
M133	Surface impoundment (to be closed as a landfill)
M134	Deepwell/underground injection
M135	Direct discharge to sewer/POTW (no prior treatment)
M136	Direct discharge to surface water under NPDES (no prior treatment)
M137	Other disposal (Specify in Comments)
	TRANSFER FACILITY STORAGE
M141	Transfer facility storage, waste was shipped off-site with no on-site TDR activity

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

APPENDIX D

1997 HAZARDOUS WASTE REPORT FORM CODES

This page intentionally left blank.

EPA HAZARDOUS WASTE CODES

Code	System Type
	LAB PACKS
	LAB PACKS - Lab packs of mixed wastes, chemicals, lab wastes
B001	Lab packs of old chemicals only
B002	Lab packs of debris only
B003	Mixed lab packs
B004	Lab packs containing acute hazardous wastes
B009	Other lab packs (Specify in Comments)
	LIQUIDS
	INORGANIC LIQUIDS - Waste that is primarily inorganic and highly fluid (e.g., aqueous), with low suspended inorganic solids and low organic content
B101	Aqueous waste with low solvents
B102	Aqueous waste with low other toxic organics
B103	Spent acid with metals
B104	Spent acid without metals
B105	Acidic aqueous waste
B106	Caustic solution with metals but no cyanides
B107	Caustic solution with metals and cyanides
B108	Caustic solution with cyanides but no metals
B109	Spent caustic
B110	Caustic aqueous waste
B111	Aqueous waste with reactive sulfides
B112	Aqueous waste with other reactives (e.g., explosives)
B113	Other aqueous waste with high dissolved solids
B114	Other aqueous waste with low dissolved solids
B115	Scrubber water
B116	Leachate
B117	Waste liquid mercury
B119	Other inorganic liquids (Specify in Comments)

Code	System Type
	LIQUIDS *(cont'd)*
	ORGANIC LIQUIDS - Waste that is primarily organic and is highly fluid, with low inorganic solids content and low-to-moderate water content
B201	Concentrated solvent-water solution
B202	Halogenated (e.g., chlorinated) solvent
B203	Nonhalogenated solvent
B204	Halogenated/nonhalogenated solvent mixture
B205	Oil-water emulsion or mixture
B206	Waste oil
B207	Concentrated aqueous solution of other organics
B208	Concentrated phenolics
B209	Organic paint, ink, lacquer, or varnish
B210	Adhesives or epoxies
B211	Paint thinner or petroleum distillates
B212	Reactive or polymerizable organic liquid
B219	Other organic liquids (Specify in Comments)
	SOLIDS
	INORGANIC SOLIDS - Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; not pumpable
B301	Soil contaminated with organics
B302	Soil contaminated with inorganics only
B303	Ash, slag, or other residue from incineration of wastes
B304	Other "dry" ash, slag, or thermal residue
B305	"Dry" lime or metal hydroxide solids chemically "fixed"
B306	"Dry" lime or metal hydroxide solids not "fixed"
B307	Metal scale, filings, or scrap
B308	Empty or crushed metal drums or containers
B309	Batteries or battery parts, casings, cores
B310	Spent solid filters or adsorbents
B311	Asbestos solids and debris
B312	Metal-cyanide salts/chemicals
B313	Reactive cyanide salts/chemicals
B314	Reactive sulfide salts/chemicals
B315	Other reactive salts/chemicals
B316	Other metal salts/chemicals
B319	Other waste inorganic solids (Specify in Comments)

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	System Type
	SOLIDS *(cont'd)*
	ORGANIC SOLIDS - Waste that is primarily organic and solid, with low-to-moderate inorganic content and water content; not pumpable
B401	Halogenated pesticide solid
B402	Nonhalogenated pesticide solid
B403	Solid resins or polymerized organics
B404	Spent carbon
B405	Reactive organic solid
B406	Empty fiber or plastic containers
B407	Other halogenated organic solids (Specify in Comments)
B409	Other nonhalogenated organic solids (Specify in Comments)
	SLUDGES
	INORGANIC SLUDGES - Waste that is primarily inorganic, with moderate-to-high water content and low organic content, and pumpable
B501	Lime sludge without metals
B502	Lime sludge with metals/metal hydroxide sludge
B503	Wastewater treatment sludge with toxic organics
B504	Other wastewater treatment sludge
B505	Untreated plating sludge without cyanides
B506	Untreated plating sludge with cyanides
B507	Other sludge with cyanides
B508	Sludge with reactive sulfides
B509	Sludge with other reactives
B510	Degreasing sludge with metal scale or filings
B511	Air pollution control device sludge (e.g., fly ash, wet scrubber sludge)
B512	Sediment or lagoon dragout contaminated with organics
B513	Sediment or lagoon dragout contaminated with inorganics only
B514	Drilling mud
B515	Asbestos slurry or sludge
B516	Chloride or other brine sludge
B519	Other inorganic sludges (Specify in Comments)

Code	System Type
	SLUDGES *(cont'd)*
	ORGANIC SLUDGES - Waste that is primarily organic with low-to-moderate inorganic solids content and water content, and pumpable
B601	Still bottoms of halogenated (e.g., chlorinated) solvents or other organic liquids
B602	Still bottoms of nonhalogenated solvents or other organic liquids
B603	Oily sludge
B604	Organic paint or ink sludge
B605	Reactive or polymerizable organics
B606	Resins, tars, or tarry sludge
B607	Biological treatment sludge
B608	Sewage or other untreated biological sludge
B609	Other organic sludges (Specify in Comments)
	GASES
	INORGANIC GASES - Waste that is primarily inorganic with a low organic content and is a gas at atmospheric pressure
B701	Inorganic gases
	ORGANIC GASES - Waste that is primarily organic with low-to-moderate inorganic content and is a gas at atmospheric pressure
B801	Organic gases

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

APPENDIX E

EPA HAZARDOUS WASTE CODES

This page intentionally left blank.

EPA HAZARDOUS WASTE CODES

Code	Waste description

CHARACTERISTICS OF HAZARDOUS WASTE *(SEE 40 CFR 261.24)*

D001	Ignitable waste
D002	Corrosive waste
D003	Reactive waste
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead
D009	Mercury
D010	Selenium
D011	Silver
D012	Endrin
D013	Lindane
D014	Methoxychlor
D015	Toxaphene
D016	2,4-D
D017	2,4,5-TP Silvex
D018	Benzene
D019	Carbon tetrachloride
D020	Chlordane
D021	Chlorobenzene
D022	Chloroform
D023	o-Cresol
D024	m-Cresol
D025	p-Cresol
D026	Cresol
D027	1,4-Dichlorobenzene
D028	1,2-Dichloroethane
D029	1,1-Dichloroethylene
D030	2,4-Dinitrotoluene
D031	Heptachlor (and its epoxide)
D032	Hexachlorobenzene
D033	Hexachlorobutadiene
D034	Hexachloroethane
D035	Methyl ethyl ketone
D036	Nitrobenzene
D037	Pentachlorophenol
D038	Pyridine
D039	Tetrachloroethylene
D040	Trichlorethylene
D041	2,4,5-Trichlorophenol
D042	2,4,6-Trichlorophenol
D043	Vinyl chloride

HAZARDOUS WASTE FROM NONSPECIFIC SOURCES *(SEE 40 CFR 261.31)*

F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichlorethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2, trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F004	The following spent nonhalogenated solvents: cresols, cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F005	The following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007	Spent cyanide plating bath solutions from electroplating operations.
F008	Plating bath residues from the bottom of plating baths from electroplating operations in which cyanides are used in the process.
F009	Spent stripping and cleaning bath solutions from electroplating operations in which cyanides are used in the process.
F010	Quenching bath residues from oil baths from metal heat treating operations in which cyanides are used in the process.
F011	Spent cyanide solutions from slat bath pot cleaning from metal heat treating operations.
F012	Quenching wastewater treatment sludges from metal heat treating operations in which cyanides are used in the process.
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce derivatives.

EPA HAZARDOUS WASTE CODES

Code	Waste description
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)
F024	Process wastes including, but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludge, spent catalysts, and wastes listed in Sections 261.31. or 261.32.)
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one, to and including five, with varying amounts and positions of chlorine substitution.
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA hazardous waste nos. F020, F021, F022, F023, F026, and F027.
F032	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use, or have previously used, chlorophenolic formulations [except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with Section 261.35 (i.e., the newly promulgated equipment cleaning or replacement standards), and where the generator does not resume or initiate use of chlorophenolic formulations]. (This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.)
F034	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.
F035	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.

EPA HAZARDOUS WASTE CODES

Code	Waste description
F037	Petroleum refinery primary oil/water/solids separation sludge - Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and storm water units receiving dry weather flow. Sludges generated in storm water units that do not receive dry weather flow, sludges generated in aggressive biological treatment units as defined in Section 261.31(b)(2)(including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units), and K051 wastes are exempted from this listing.
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge - Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated in aggressive biological treatment units as defined in Section 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units), and F037, K048, and K051 wastes are exempted from this listing.
F039	Leachate resulting from the treatment, storage, or disposal of wastes classified by more than one waste code under Subpart D, or from a mixture of wastes classified under Subparts C and D of this part. (Leachate resulting from the management of one or more of the following EPA Hazardous Wastes and no other hazardous wastes retains its hazardous waste code(s): F020, F021, F022, F023, F026, F027, and/or F028.)
HAZARDOUS WASTE FROM SPECIFIC SOURCES *(SEE 40 CFR 261.32)*	
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.
K003	Wastewater treatment sludge from the production of molybdate orange pigments.
K004	Wastewater treatment sludge from the production of zinc yellow pigments.
K005	Wastewater treatment sludge from the production of chrome green pigments.
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).
K007	Wastewater treatment sludge from the production of iron blue pigments.
K008	Oven residue from the production of chrome oxide green pigments.
K009	Distillation bottoms from the production of acetaldehyde from ethylene.
K010	Distillation side cuts from the production of acetaldehyde from ethylene.
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.
K015	Still bottoms from the distillation of benzyl chloride.
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.
K018	Heavy ends from the fractionation column in ethyl chloride production.
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.
K021	Aqueous spent antimony catalyst waste from fluoromethane production.
K022	Distillation bottom tars from the production of phenol/acetone from cumene.
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.
K026	Stripping still tails from the production of methyl ethyl pyridines.
K027	Centrifuge and distillation residues from toluene diisocyanate production.
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.
K031	By-product salts generated in the production of MSMA and cacodylic acid.
K032	Wastewater treatment sludge from the production of chlordane.
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.
K035	Wastewater treatment sludges generated in the production of creosote.
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.
K037	Wastewater treatment sludges from the production of disulfoton.
K038	Wastewater from the washing and stripping of phorate production.
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.
K040	Wastewater treatment sludge from the production of phorate.
K041	Wastewater treatment sludge from the production of toxaphene.
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.
K043	2,6-dichlorophenol waste from the production of 2,4-D.
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.
K045	Spent carbon from the treatment of wastewater containing explosives.
K046	Wastewater treatment sludges from the manufacturing, formulation, and loading of lead-based initiating compounds.
K047	Pink/red water from TNT operations.
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.
K049	Slop oil emulsion solids from the petroleum refining industry.
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.
K051	API separator sludge from the petroleum refining industry.
K052	Tank bottoms (leaded) from the petroleum refining industry.
K060	Ammonia still lime sludge from coking operations.
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.
K062	Spent pickle liquor from steel finishing operations of plants that produce iron or steel.
K064	Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.

EPA HAZARDOUS WASTE CODES

Code	Waste description
K069	Emission control dust/sludge from secondary lead smelting.
K071	Brine purification muds from the mercury cell process in chlorine production, in which separately prepurified brine is not used.
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.
K083	Distillation bottoms from aniline production.
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.
K087	Decanter tank tar sludge from coking operations.
K088	Spent potliners from primary aluminum reduction.
K090	Emission control dust or sludge from ferrochromiumsilicon production.
K091	Emission control dust or sludge from ferrochromium production.
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.
K098	Untreated process wastewater from the production of toxaphene.
K099	Untreated wastewater from the production of 2,4-D.
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
K103	Process residues from aniline extraction from the production of aniline.
K104	Combined wastewaters generated from nitrobenzene/aniline production.
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.
K106	Wastewater treatment sludge from the mercury cell process in chlorine production.
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine from carboxylic acid hydrazides.
K109	Spent filter cartridges from product purification from the product of 1,1-dimethylhydrazine from carboxylic acid hydrazides.
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine from carboxylic acid hydrazides.
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.
K113	Condensed liquid light ends from purification of toluenediamine in production of toluenediamine via hydrogenation of dinitrotoluene.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
K114	Vicinals from the purification of toluenediamine in production of toluenediamine via hydrogenation of dinitrotoluene.
K115	Heavy ends from purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.
K126	Baghouse dust and floor sweepings in milling and packaging operations from production or formulation of ethylenebisdithiocarbamic acid and its salts.
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.
K141	Process residues from the recovery of coal tar, including, but not limited to, tar collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank sludge from coking operations).
K142	Tank storage residues from the production of coke from coal or from the recovery of coke by-products from coal.
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.
K147	Tar storage residues from coal tar refining.
K148	Residues from coal tar distillation, including, but not limited to, still bottoms.
K149	Distillation bottoms from the production of alpha (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. [This waste does not include still bottoms from the distillation of benzoyl chloride]
K150	Organic residuals excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha (or methyl-) chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha (or methyl-) chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decamtates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2propynl n-butylcarbamate.).

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2propynl n-butylcarbamate.).
K158	Bag house and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2propynl n-butylcarbamate.).
K159	Organics from the treatment of thiocarbamate wastes.
K161	Purification soilids (including filtration, evaporation, and centrifugation soilds), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126)
	DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUALS, AND SPILL RESIDUES THEREOF – ACUTE HAZARDOUS WASTE *(SEE 40 CFR 261.33 FOR AN ALPHABETIZED LISTING)*
P001	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P001	Warfarin, & salts, when present at concentrations greater than 0.3%
P002	1-Acetyl-2-thiourea
P002	Acetamide, N-(aminothioxomethyl)-
P003	2-Propenal
P003	Acrolein
P004	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha, 4alpha, 4abeta, 5alpha, 8alpha, 8abeta)-
P004	Aldrin
P005	2-Propen-1-ol
P005	Allyl alcohol
P006	Aluminum phosphide (R,T)
P007	3(2H)-Isoxazolone, 5-(aminomethyl)-
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P008	4-Pyridinamine
P009	Ammonium picrate (R)
P009	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P010	Arsenic acid H_3AsO_4
P011	Arsenic oxide As_2O_5
P011	Arsenic pentoxide
P012	Arsenic oxide As_2O_3
P012	Arsenic trioxide
P013	Barium cyanide
P014	Benzenethiol
P014	Thiophenol
P015	Beryllium powder
P016	Dichloromethyl ether
P016	Methane, oxybis[chloro-
P017	2-Propanone, 1-bromo-
P017	Bromoacetone
P018	Brucine
P018	Strychnidin-10-one, 2,3-dimethoxy-
P020	Dinoseb
P020	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P021	Calcium cyanide
P021	Calcium cyanide $Ca(CN)_2$
P022	Carbon disulfide
P023	Acetaldehyde, chloro-

EPA HAZARDOUS WASTE CODES

Code	Waste description
P023	Chloroacetaldehyde
P024	Benzenamine, 4-chloro-
P024	p-Chloraniline
P026	1-(o-Chlorophenyl)thiourea
P026	Thiourea, (2-chlorophenyl)-
P027	3-Chloropropionitrile
P027	Propanenitrile, 3-chloro-
P028	Benzene, (chloromethyl)-
P028	Benzyl chloride
P029	Copper cyanide
P029	Copper cyanide Cu(CN)
P030	Cyanides (soluble cyanide salts), not otherwise specified
P031	Cyanogen
P031	Ethanedinitrile
P033	Cyanogen chloride
P033	Cyanogen chloride (CN)Cl
P034	2-Cyclohexyl-4,6-dinitrophenol
P034	Phenol, 2-cyclohexyl-4,6-dinitro-
P036	Arsonous dichloride, phenyl-
P036	Dichlorophenylarsine
P037	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta, 2aalpha, 3beta, 6beta, 6aalpha, 7beta, 7aalpha)-
P037	Dieldrin
P038	Arsine, diethyl-
P038	Diethylarsine
P039	Disulfoton
P039	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P040	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P041	Diethyl-p-nitrophenyl phosphate
P041	Phosphoric acid, diethyl 4-nitrophenyl ester
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P042	Epinephrine
P043	Diisopropylfluorophosphate (DFP)
P043	Phosphorofluoridic acid, bis(1-methylethyl) ester
P044	Dimethoate
P044	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P045	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino)carbonyl] oxime
P045	Thiofanox
P046	alpha,alpha-Dimethylphenethylamine
P046	Benzeneethanamine, alpha, alpha-dimethyl-
P047	4,6-Dinitro-o-cresol, & salts
P047	Phenol, 2-methyl-4,6-dinitro-, & salts
P048	2,4-Dinitrophenol
P048	Phenol, 2,4-dinitro-
P049	Dithiobiuret
P049	Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
P050	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-,3-oxide
P050	Endosulfan
P051	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta, 2abeta, 3alpha, 6alpha, 6abeta, 7beta, 7aalpha)- & metabolites
P051	Endrin
P051	Endrin, & metabolites

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
P054	Aziridine
P054	Ethyleneimine
P056	Fluorine
P057	Acetamide, 2-fluoro-
P057	Fluoroacetamide
P058	Acetic acid, fluoro-, sodium salt
P058	Fluoroacetic acid, sodium salt
P059	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P059	Heptachlor
P060	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha, 4alpha, 4abeta, 5beta, 8beta, 8abeta)-
P060	Isodrin
P062	Hexaethyl tetraphosphate
P062	Tetraphosphoric acid, hexaethyl ester
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P064	Methane, isocyanato-
P064	Methyl isocyanate
P065	Fulminic acid, mercury(2+) salt (R,T)
P065	Mercury fulminate (R,T)
P066	Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester
P066	Methomyl
P067	1,2-Propylenimine
P067	Aziridine, 2-methyl-
P068	Hydrazine, methyl-
P068	Methyl hydrazine
P069	2-Methyllactonitrile
P069	Propanenitrile, 2-hydroxy-2-methyl-
P070	Aldicarb
P070	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P071	Methyl parathion
P071	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P072	alpha-Naphthylthiourea
P072	Thiourea, 1-naphthalenyl-
P073	Nickel carbonyl
P073	Nickel carbonyl $Ni(CO)_4$, (T-4)-
P074	Nickel cyanide
P074	Nickel cyanide $Ni(CN)_2$
P075	Nicotine, & salts
P075	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-,(S)-, & salts
P076	Nitric oxide
P076	Nitrogen oxide NO
P077	Benzenamine, 4-nitro-
P077	p-Nitroaniline
P078	Nitrogen dioxide
P078	Nitrogen oxide NO_2
P081	1,2,3-Propanetriol, trinitrate (R)
P081	Nitroglycerine (R)
P082	Methanimine, N-methyl-N-nitroso-
P082	N-Nitrosodimethylamine
P084	N-Nitrosomethylvinylamine
P084	Vinylamine, N-methyl-N-nitroso-
P085	Diphosphoramide, octamethyl-
P085	Octamethylpyrophosphoramide

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
P087	Osmium oxide OsO_4, (T-4)-
P087	Osmium tetroxide
P088	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P088	Endothall
P089	Parathion
P089	Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester
P092	Mercury, (acetato-O)phenyl-
P092	Phenylmercury acetate
P093	Phenylthiourea
P093	Thiourea, phenyl-
P094	Phorate
P094	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P095	Carbonic dichloride
P095	Phosgene
P096	Hydrogen phosphide
P096	Phosphine
P097	Famphur
P097	Phosphorothioic acid O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester
P098	Potassium cyanide
P098	Potassium cyanide K(CN)
P099	Argentate (1-), bis(cyano-C)-, potassium
P099	Potassium silver cyanide
P101	Ethyl cyanide
P101	Propanenitrile
P102	2-Propyn-1-ol
P102	Propargyl alcohol
P103	Selenourea
P104	Silver cyanide
P104	Silver cyanide Ag(CN)
P105	Sodium azide
P106	Sodium cyanide
P106	Sodium cyanide Na(CN)
P108	Strychnidin-10-one, & salts
P108	Strychnine, & salts
P109	Tetraethyldithiopyrophosphate
P109	Thiodiphosphoric acid, tetraethyl ester
P110	Plumbane, tetraethyl-
P110	Tetraethyl lead
P111	Diphosphoric acid, tetraethyl ester
P111	Tetraethyl pyrophosphate
P112	Methane, tetranitro- (R)
P112	Tetranitromethane (R)
P113	Thallic oxide
P113	Thallium oxide Tl_2O_3
P114	Selenious acid, dithallium (1+) salt
P114	Thallium(I) selenite
P115	Sulfuric acid, dithallium (1+) salt
P115	Thallium(I) sulfate
P116	Hydrazinecarbothioamide
P116	Thiosemicarbazide
P118	Methanethiol, trichloro-
P118	Trichloromethanethiol
P119	Ammonium vanadate
P119	Vanadic acid, ammonium salt

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
P120	Vanadium oxide V_2O_5
P120	Vanadium pentoxide
P121	Zinc cyanide
P121	Zinc cyanide $Zn(CN)_2$
P122	Zinc phosphide Zn_3P_2, when present at concentrations greater than 10% (R,T)
P123	Toxaphene
P127	7-Benzofuranol, 2-3dihydro-2,2-dimethyl-, methylcarbamate
P127	Carbofuran.
P127	7-Benzufuranol, 2, 3-dihydro-2, 2 dimethyl-, methylcarbamate
P128	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
P128	Mexacarbate
P185	1,3-Dithiolane-2carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime.
P188	Physostigmine salicylate
P189	Carbosulfan
P189	Carbamic acid, [(dibutylamino)-thio]methyl-,2,3-dihydro-2,2dimethyl-7benzofuranyl ester.
P190	Metolcarb.
P191	Dimetilan
P191	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester.
P192	Isolan
P192	Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazo-5-yl ester.
P194	Ethanimidothioc acid, 2-(dimethylamino)-N-[((methylamino) carbonyl)oxy)-2-oxo-, methyl ester
P194	Oxamyl
P196	Manganese, bis(dimethylcarbamodithioato-S,S')
P196	Manganese dimethyldithiocarbamate
P197	Formparanate
P197	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4[[(methylamino)carbonyl)oxy] phenyl]
P198	Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride
P198	Formetanate hydrochloride
P199	Methiocarb.
P199	Phenol, (3,5-dimethyl-4(methlthio)-, methylcarbamate
P201	Promecarb
P201	Phenol, 3-methyl-5-(1-methylethyl)-,methyl carbamate
P202	Phenol, 3-(1 methylethyl)-, methyl carbamate
P202	3-Isopropylphenyl N-methylcarbamate
P202	m-Cumenyl methylcarbamate
P203	Aldicarb sulfone.
P203	Propanal, 2-methyl-2-(methyl-sulfonyl)-,O-[(methylamino)carbonyl]oxime
P204	Physostigmine
P204	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1, 3a,8-trimethylmethylcarbamate (ester), (3aS-cis)-

EPA HAZARDOUS WASTE CODES

Code	Waste description
	DISCARDED COMMERCIAL CHEMICAL PRODUCTS, OFF-SPECIFICATION SPECIES, CONTAINER RESIDUES, AND SPILL RESIDUES THEREOF – TOXIC WASTES *(SEE 40 CFR 261.33 FOR AN ALPHABETIZED LISTING)*
	2,3,4,6-Tetrachlorophenol
	2,4,5-T
	2,4,5-Trichlorophenol
	2,4,6-Trichlorophenol
	Acetic acid, (2,4,5-trichlorophenoxy)-
	Pentachlorophenol
	Phenol, 2,3,4,6-tetrachloro-
	Phenol, 2,4,5-trichloro-
	Phenol, 2,4,6-trichloro-
	Phenol, pentachloro-
	Propanoic acid, 2-(2,4,5-trichlorophenoxy-
	Silvex (2,4,5-TP)
U001	Acetaldehyde (I)
U001	Ethanal (I)
U002	2-Propanone (I)
U002	Acetone (I)
U003	Acetonitrile (I,T)
U004	Acetophenone
U004	Ethanone, 1-phenyl-
U005	2-Acetylaminofluorene
U005	Acetamide, N-9H-fluoren-2-yl
U006	Acetyl chloride (C,R,T)
U007	2-Propenamide
U007	Acrylamide
U008	2-Propenoic acid (I)
U008	Acrylic acid (I)
U009	2-Propenenitrile
U009	Acrylonitrile
U010	Azirino [2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy] methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta, 8aalpha, 8balpha)]-
U010	Mitomycin C
U011	1H-1,2,4-Triazol-3-amine
U011	Amitrole
U012	Aniline (I,T)
U012	Benzenamine (I,T)
U014	Auramine
U014	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U015	Azaserine
U015	L-Serine, diazoacetate (ester)
U016	Benz[c]acridine
U017	Benzal chloride
U017	Benzene, (dichloromethyl)-
U018	Benz[a]anthracene
U019	Benzene (I,T)
U020	Benzenesulfonic acid chloride (C,R)
U020	Benzenesulfonyl chloride (C,R)
U021	[1,1'-Biphenyl]-4,4'-diamine
U021	Benzidine
U022	Benzo[a]pyrene
U023	Benzene, (trichloromethyl)-
U023	Benzotrichloride (C,R,T)
U024	Dichloromethoxy ethane
U024	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U025	Dichloroethyl ether
U025	Ethane, 1,1'-oxybis[2-chloro-
U026	Chlornaphazin
U026	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U027	Dichloroisopropyl ether
U027	Propane, 2,2'-oxybis[2-chloro-
U028	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester

EPA HAZARDOUS WASTE CODES

Code	Waste description
U028	Diethylhexyl phthalate
U029	Methane, bromo-
U029	Methyl bromide
U030	4-Bromophenyl phenyl ether
U030	Benzene, 1-bromo-4-phenoxy-
U031	1-Butanol (I)
U031	n-Butyl alcohol (I)
U032	Calcium chromate
U032	Chromic acid H_2CrO_4, calcium salt
U033	Carbon oxyfluoride (R,T)
U033	Carbonic difluoride
U034	Acetaldehyde, trichloro-
U034	Chloral
U035	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U035	Chlorambucil
U036	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U036	Chlordane, alpha & gamma isomers
U037	Benzene, chloro-
U037	Chlorobenzene
U038	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U038	Chlorobenzilate
U039	p-Chloro-m-cresol
U039	Phenol, 4-chloro-3-methyl-
U041	Epichlorohydrin
U041	Oxirane, (chloromethyl)-
U042	2-Chloroethyl vinyl ether
U042	Ethene, (2-chloroethoxy)-
U043	Ethene, chloro-
U043	Vinyl chloride
U044	Chloroform
U044	Methane, trichloro-
U045	Methane, chloro- (I,T)
U045	Methyl chloride (I,T)
U046	Chloromethyl methyl ether
U046	Methane, chloromethoxy-
U047	beta-Chloronaphthalene
U047	Naphthalene, 2-chloro-
U048	o-Chlorophenol
U048	Phenol, 2-chloro-
U049	4-Chloro-o-toluidine, hydrochloride
U049	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U050	Chrysene
U051	Creosote
U052	Cresol (Cresylic acid)
U052	Phenol, methyl-
U053	2-Butenal
U053	Crotonaldehyde
U055	Benzene, (1-methylethyl)- (I)
U055	Cumene (I)
U056	Benzene, hexahydro- (I)
U056	Cyclohexane (I)
U057	Cyclohexanone (I)
U058	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U058	Cyclophosphamide

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
U059	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U059	Daunomycin
U060	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U060	DDD
U061	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U061	DDT
U062	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U062	Diallate
U063	Dibenz[a,h]anthracene
U064	Benzo[rst]pentaphene
U064	Dibenzo[a,i]pyrene
U066	1,2-Dibromo-3-chloropropane
U066	Propane, 1,2-dibromo-3-chloro-
U067	Ethane, 1,2-dibromo-
U067	Ethylene dibromide
U068	Methane, dibromo-
U068	Methylene bromide
U069	1,2-Benzenedicarboxylic acid, dibutyl ester
U069	Dibutyl phthalate
U070	Benzene, 1,2-dichloro-
U070	o-Dichlorobenzene
U071	Benzene, 1,3-dichloro-
U071	m-Dichlorobenzene
U072	Benzene, 1,4-dichloro-
U072	p-Dichlorobenzene
U073	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U073	3,3'-Dichlorobenzidine
U074	1,4-Dichloro-2-butene (I,T)
U074	2-Butene, 1,4-dichloro- (I,T)
U075	Dichlorodifluoromethane
U075	Methane, dichlorodifluoro-
U076	Ethane, 1,1-dichloro-
U076	Ethylidene dichloride
U077	Ethane, 1,2-dichloro-
U077	Ethylene dichloride
U078	1,1-Dichloroethylene
U078	Ethene, 1,1-dichloro-
U079	1,2-Dichloroethylene
U079	Ethene, 1,2-dichloro-,(E)-
U080	Methane, dichloro-
U080	Methylene chloride
U081	2,4-Dichlorophenol
U081	Phenol, 2,4-dichloro-
U082	2,6-Dichlorophenol
U082	Phenol, 2,6-dichloro-
U083	Propane, 1,2-dichloro-
U083	Propylene dichloride
U084	1,3-Dichloropropene
U084	1-Propene, 1,3-dichloro-
U085	1,2:3,4-Diepoxybutane (I,T)
U085	2,2'-Bioxirane
U086	Hydrazine, 1,2-diethyl-
U086	N,N'-Diethylhydrazine
U087	O,O-Diethyl S-methyl dithiophosphate

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
U087	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U088	1,2-Benzenedicarboxylic acid, diethyl ester
U088	Diethyl phthalate
U089	Diethylstilbesterol
U089	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis, (E)-
U090	1,3-Benzodioxole, 5-propyl-
U090	Dihydrosafrole
U091	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U091	3,3'-Dimethoxybenzidine
U092	Dimethylamine (I)
U092	Methanamine, N-methyl- (I)
U093	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U093	p-Dimethylaminoazobenzene
U094	7,12-Dimethylbenz[a]anthracene
U094	Benz[a]anthracene, 7,12-dimethyl-
U095	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U095	3,3'-Dimethylbenzidine
U096	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U096	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U097	Carbamic chloride, dimethyl-
U097	Dimethylcarbamoyl chloride
U098	1,1-Dimethylhydrazine
U098	Hydrazine, 1,1-dimethyl-
U099	1,2-Dimethylhydrazine
U099	Hydrazine, 1,2-diphenyl-
U101	2,4-Dimethylphenol
U101	Phenol, 2,4-dimethyl-
U102	1,2-Benzenedicarboxylic acid, dimethyl ester
U102	Dimethyl phthalate
U103	Dimethyl sulfate
U103	Sulfuric acid, dimethyl ester
U105	2,4-Dinitrotoluene
U105	Benzene, 1-methyl-2,4-dinitro-
U106	2,6-Dinitrotoluene
U106	Benzene, 2-methyl-1,3-dinitro-
U107	1,2-Benzenedicarboxylic acid, dioctyl ester
U107	Di-n-octyl phthalate
U108	1,4-Diethyleneoxide
U108	1,4-Dioxane
U109	1,2-Diphenylhydrazine
U109	Hydrazine, 1,2-diphenyl-
U110	1-Propanimine, N-propyl-(I)
U110	Dipropylamine (I)
U111	1-Propanamine, N-nitroso-N-propyl-
U111	Di-n-propylnitrosamine
U112	Acetic acid, ethyl ester (I)
U112	Ethyl acetate (I)
U113	2-Propenoic acid, ethyl ester (I)
U113	Ethyl acrylate (I)
U114	Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters
U114	Ethylenebisdithiocarbamic acid, salts & esters
U115	Ethylene oxide (I,T)
U115	Oxirane (I,T)
U116	2-Imidazolidinethione
U116	Ethylenethiourea
U117	Ethane, 1,1'-oxybis-(I)

EPA HAZARDOUS WASTE CODES

Code	Waste description
U117	Ethyl ether (I)
U118	2-Propenoic acid, 2-methyl-, ethyl ester
U118	Ethyl methacrylate
U119	Ethyl methanesulfonate
U119	Methanesulfonic acid, ethyl ester
U120	Fluoranthene
U121	Methane, trichlorofluoro-
U121	Trichloromonofluoromethane
U122	Formaldehyde
U123	Formic acid (C,T)
U124	Furan (I)
U124	Furfuran (I)
U125	2-Furancarboxaldehyde (I)
U125	Furfural (I)
U126	Glycidylaldehyde
U126	Oxiranecarboxyaldehyde
U127	Benzene, hexachloro-
U127	Hexachlorobenzene
U128	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U128	Hexachlorobutadiene
U129	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha, 3beta, 4alpha, 5alpha, 6beta)-
U129	Lindane
U130	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U130	Hexachlorocyclopentadiene
U131	Ethane, hexachloro-
U131	Hexachloroethane
U132	Hexachlorophene
U132	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U133	Hydrazine (R,T)
U134	Hydrofluoric acid (C,T)
U134	Hydrogen fluoride (C,T)
U135	Hydrogen sulfide
U135	Hydrogen sulfide H_2S
U136	Arsinic acid, dimethyl-
U136	Cacodylic acid
U137	Indeno[1,2,3-cd]pyrene
U138	Methane, iodo-
U138	Methyl iodide
U140	1-Propanol, 2-methyl- (I,T)
U140	Isobutyl alcohol (I,T)
U141	1,3-Benzodioxole, 5-(1-propenyl)-
U141	Isosafrole
U142	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U142	Kepone
U143	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z), 7(2S*,3R*), 7aalpha]]-
U143	Lasiocarpine
U144	Acetic acid, lead(2+) salt
U144	Lead acetate
U145	Lead phosphate
U145	Phosphoric acid, lead(2+) salt (2:3)
U146	Lead subacetate
U146	Lead, bis(acetato-O)tetrahydroxytri-
U147	2,5-Furandione
U147	Maleic anhydride

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
U148	3,6-Pyridazinedione, 1,2-dihydro-
U148	Maleic hydrazide
U149	Malononitrile
U149	Propanedinitrile
U150	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U150	Melphalan
U151	Mercury
U152	2-Propenenitrile, 2-methyl- (I,T)
U152	Methacrylonitrile (I,T)
U153	Methanethiol (I,T)
U153	Thiomethanol (I,T)
U154	Methanol (I)
U154	Methyl alcohol (I)
U155	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U155	Methapyrilene
U156	Carbonochloridic acid, methyl ester, (I,T)
U156	Methyl chlorocarbonate (I,T)
U157	3-Methylcholanthrene
U157	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U158	4,4'-Methylenebis(2-chloroaniline)
U158	Benzenamine, 4,4'-methylenebis[2-chloro-
U159	2-Butanone (I,T)
U159	Methyl ethyl ketone (MEK) (I,T)
U160	2-Butanone, peroxide (R,T)
U160	Methyl ethyl ketone peroxide (R,T)
U161	4-Methyl-2-pentanone (I)
U161	Methyl isobutyl ketone (I)
U161	Pentanol, 4-methyl-
U162	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U162	Methyl methacrylate (I,T)
U163	Guanidine, N-methyl-N'-nitro-N-nitroso-
U163	MNNG
U164	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U164	Methylthiouracil
U165	Naphthalene
U166	1,4-Naphthalenedione
U166	1,4-Naphthoquinone
U167	1-Napthalenamine
U167	alpha-Naphthylamine
U168	2-Napthalenamine
U168	beta-Naphthylamine
U169	Benzene, nitro-
U169	Nitrobenzene (I,T)
U170	p-Nitrophenol (I,T)
U170	Phenol, 4-nitro-
U171	2-Nitropropane (I,T)
U171	Propane, 2-nitro- (I,T)
U172	1-Butanamine, N-butyl-N-nitroso-
U172	N-Nitrosodi-n-butylamine
U173	Ethanol, 2,2'-(nitrosoimino)bis-
U173	N-Nitrosodiethanolamine
U174	Ethanamine, N-ethyl-N-nitroso-
U174	N-Nitrosodiethylamine
U176	N-Nitroso-N-ethylurea
U176	Urea, N-ethyl-N-nitroso-
U177	N-Nitroso-N-methylurea

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
U177	Urea, N-methyl-N-nitroso-
U178	Carbamic acid, methylnitroso-, ethyl ester
U178	N-Nitroso-N-methylurethane
U179	N-Nitrosopiperidine
U179	Piperidine, 1-nitroso-
U180	N-Nitrosopyrrolidine
U180	Pyrrolidine, 1-nitroso-
U181	5-Nitro-o-toluidine
U181	Benzenamine, 2-methyl-5-nitro
U182	1,3,5-Trioxane, 2,4,6-trimethyl-
U182	Paraldehyde
U183	Benzene, pentachloro-
U183	Pentachlorobenzene
U184	Ethane, pentachloro-
U184	Pentachloroethane
U185	Benzene, pentachloronitro-
U185	Pentachloronitrobenzene (PCNB)
U186	1,3-Pentadiene (I)
U186	1-Methylbutadiene (I)
U187	Acetamide, N-(4-ethoxyphenyl)-
U187	Phenacetin
U188	Phenol
U189	Phosphorus sulfide (R)
U189	Sulfur phosphide (R)
U190	1,3-Isobenzofurandione
U190	Phthalic anhydride
U191	2-Picoline
U191	Pyridine, 2-methyl-
U192	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U192	Pronamide
U193	1,2-Oxathiolane, 2,2-dioxide
U193	1,3-Propane sultone
U194	1-Propanamine (I,T)
U194	n-Propylamine (I,T)
U196	Pyridine
U197	2,5-Cyclohexadiene-1,4-dione
U197	p-Benzoquinone
U200	Reserpine
U200	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl) oxy]-, methyl ester, (3beta, 16beta, 17alpha, 18beta, 20alpha)-
U201	1,3-Benzenediol
U201	Resorcinol
U202	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
U202	Saccharin, & salts
U203	1,3-Benzodioxole, 5-(2-propenyl)-
U203	Safrole
U204	Selenious acid
U204	Selenium dioxide
U205	Selenium sulfide
U205	Selenium sulfide SeS_2 (R,T)
U206	D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)-carbonyl]amino]-
U206	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-,D-
U206	Streptozotocin
U207	1,2,4,5-Tetrachlorobenzene
U207	Benzene, 1,2,4,5-tetrachloro-

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
U208	1,1,1,2-Tetrachloroethane
U208	Ethane, 1,1,1,2-tetrachloro-
U209	1,1,2,2-Tetrachloroethane
U209	Ethane, 1,1,2,2-tetrachloro-
U210	Ethene, tetrachloro-
U210	Tetrachloroethylene
U211	Carbon tetrachloride
U211	Methane, tetrachloro-
U213	Furan, tetrahydro-(I)
U213	Tetrahydrofuran (I)
U214	Acetic acid, thallium(1+) salt
U214	Thallium(I) acetate
U215	Carbonic acid, dithallium(1+) salt
U215	Thallium(I) carbonate
U216	Thallium chloride Tlcl
U216	Thallium(I) chloride
U217	Nitric acid, thallium(1+) salt
U217	Thallium(I) nitrate
U218	Ethanethioamide
U218	Thioacetamide
U219	Thiourea
U220	Benzene, methyl-
U220	Toluene
U221	Benzenediamine, ar-methyl-
U221	Toluenediamine
U222	Benzenamine, 2-methyl-, hydrochloride
U222	o-Toluidine hydrochloride
U223	Benzene, 1,3-diisocyanatomethyl- (R,T)
U223	Toluene diisocyanate (R,T)
U225	Bromoform
U225	Methane, tribromo-
U226	Ethane, 1,1,1-trichloro-
U226	Methyl chloroform
U227	1,1,2-Trichloroethane
U227	Ethane, 1,1,2-trichloro-
U228	Ethene, trichloro-
U228	Trichloroethylene
U234	1,3,5-Trinitrobenzene (R,T)
U234	Benzene, 1,3,5-trinitro-
U235	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U235	Tris(2,3,-dibromopropyl) phosphate
U236	2,7-Naphthalenedisulfonic acid,3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U236	Trypan blue
U237	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U237	Uracil mustard
U238	Carbamic acid, ethyl ester
U238	Ethyl carbamate (urethane)
U239	Benzene, dimethyl- (I,T)
U239	Xylene (I)
U240	2,4-D, salts & esters
U240	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U240	Dichlorophenoxyacetic acid 2,4-D
U243	1-Propene, 1,1,2,3,3,3-hexachloro-
U243	Hexachloropropene

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

EPA HAZARDOUS WASTE CODES

Code	Waste description
U244	Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl-
U244	Thiram
U246	Cyanogen bromide (CN)Br
U247	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-
U247	Methoxychlor
U248	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less
U248	Warfarin, & salts, when present at concentrations of 0.3% or less
U249	Zinc phosphide Zn_3P_2, when present at concentrations of 10% or less
U328	Benzenamine, 2-methyl-
U328	o-Toluidine
U353	Benzenamine, 4-methyl-
U353	p-Toluidine
U359	Ethanol, 2-ethoxy-
U359	Ethylene glycol monoethyl ether
U364	1,3-Benzodioxol-4ol, 2,2-dimethyl
U364	Bendiocarb phenol
U367	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-
U367	Carbofuran phenol
U372	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester
U372	Carbendazim
U373	Carbamic acid, phenyl-, 1-methylethyl ester
U373	Propham
U387	Carbamothiocic acid, dipropyl-, S-(phenylmethyl) ester
U387	Prosulfocarb
U389	Triallate
U389	Carbamothiocic acid, bis (1-methylethyl)-, S-(2,3,3-trichloro-2propenyl) ester
U394	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo, methyl ester
U394	A2213
U395	Diethylene glycol, dicarbamate
U395	Ethanol, 2, 2;-oxybis-,dicarbamate
U404	Ethanamine, N, N-diethyl-
U404	Triethylamine
U409	Thiophanate-methyl
U409	Carbamic acid, (1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester
U410	Ethanimidothioci acid, N, N'-(thiobis[(methylimino)carbonyloxy])bis-, dimethyl ester
U411	Propoxur
U411	Phenol, 2-(-1-methylethoxy)-, methylcarbamate

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.